



GOVERNMENT OF INDIA  
**TARIFF COMMISSION**

# **REPORT ON THE CONTINUANCE OF PROTECTION TO THE NON-FERROUS METALS INDUSTRY**



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GOVERNMENT OF INDIA  
MINISTRY OF COMMERCE & INDUSTRY  
RESOLUTION

TARIFFS

*New Delhi, the 4th December 1959.*

**No. 22(1)-T.R./59.**—The Tariff Commission has submitted its Report on the continuance of protection to the Non-Ferrous Metals Industry on the basis of an inquiry undertaken by it under Sections 11(e) and 13 of the Tariff Commission Act, 1951. Its recommendations are as follows :—

- (1) Protection granted to copper and brass sheets, commercial and industrial, [I.C.T. item Nos. 64(5) and 70A], lead sheets for teachests [I.C.T. Item No. 67(1)] and lead strips [I.C.T. Item No. 67(4)] may be discontinued on the expiry of the current period of protection on 31st December, 1959.
  - (2) Protection granted to lead sheets other than sheets for teachests [I.C.T. Item No. 67(2)], zinc sheets, not otherwise specified [I.C.T. Item No. 68(2)], zinc strips [I.C.T. Item No. 68(4)], Copper rods, other than electrolytic copper rods [I.C.T. Item No. 64(3)] brass rods [I.C.T. Item No. 70(5)], copper pipes and tubes, [I.C.T. Item No. 64(5)] and brass pipes and tubes [I.C.T. Item No. 70A] may be continued for a further period of three years from 1st January, 1960, at the existing rates of protective duties.
  - (3) Kamani Metals and Alloys Ltd. and Indian Smelting and Refining Co. Ltd. should announce their prices of commercial sheets of brass and copper like Indian Copper Corporation and also ensure that their agents or stockists charge only list prices to consumers.
  - (4) All units in the industry should show due awareness of their obligations as a protected industry and introduce a proper system of costing without delay. The introduction of this system should be reported to the Commission by 30th June, 1960.
2. Government accept recommendations (1) and (2) and will take steps to implement them in due course.
  3. The attention of Kamani Metals and Alloys Ltd. and Indian Smelting and Refining Co. Ltd. is invited to recommendation (3).
  4. The attention of all units in the industry is drawn to recommendation (4).

ORDER

ORDERED that a copy of the Resolution be communicated to all concerned and that it be published in the *Gazette of India*.

S. RANGANATHAN,

*Secretary to the Government of India.*

## REPORT ON THE CONTINUANCE OF PROTECTION TO THE NON-FERROUS METALS INDUSTRY

1. The history of tariff protection to the non-ferrous metals industry upto the end of 1957 is given in our Report (1957) on the continuance of protection to the industry. Briefly, protection was granted to the industry for the first time in 1948 after a Tariff Board inquiry and the scheme of protection included the levy of protective duties on : (a) certain non-ferrous alloys, such as nickel alloys including nickel silver and cupro-nickel, tin solder and other white metals, type metal, yellow metal alloys (brass, gun metal, bronze, bell metal and phosphor bronze) (b) semi-manufactures like brass sheets, wires and rods, copper sheets rods, tubes and pipes, lead and zinc sheets ; and (c) manufactured articles, such as steam and sanitary fittings. The period of protection which was initially fixed upto 31st March 1950 was extended by Government, in consultation with the Tariff Board and later with the Tariff Commission, year after year until 31st December 1957. In that year the Commission undertook a fresh investigation into the claim of the industry to continuance of protection and in the Report dated 16th October 1957, recommended that protection granted to non-ferrous alloys and manufactures should be discontinued with effect from 1st January, 1958. As regards semi-manufactures, the Commission recommended that protection to articles covered by the Indian Customs Tariff items Nos. 64(3), 64(5), 67(1), 67(2), 67(4), 68(2), 68(4), 70A and 70(5) should be continued upto 31st December 1959 at the prevailing rates of duty. These recommendations were accepted by Government and given effect to by the Indian Tariff (Second Amendment) Act, 1957.

2. As the current period of protection to non-ferrous semi-manufactures is due to expire on 31st December 1959 we have undertaken the present inquiry under section 11(e) read with section 13 of the Tariff Commission Act, 1951 by which we are empowered to inquire into the working of protection granted to an industry and to make suitable recommendations with a view to its increase, decrease, modification or abolition according to the circumstances of the case.

3.1. It will be seen from paragraph 3.4 of our 1957 Report that we had decided to hold separate inquiries into the following industries :

- (a) virgin lead and zinc ;
- (b) lead and zinc sheets and strips ;
- (c) brass and copper sheets, rods, pipes and tubes ; and
- (d) nickel anodes (cast and rolled).

Necessary steps to collect relevant data about the virgin lead and zinc industry were initiated in the latter half of 1958 but further action had to be deferred as no definite information was available regarding the

expansion plans of Metal Corporation of India Ltd. which is the only unit engaged in the manufacture of virgin lead and zinc concentrates. The firm has been in correspondence with Government for some time past and though the matter is reported to have reached a fairly advanced stage, the installation of a zinc smelter or the expansion and modernisation of its lead smelter is unlikely to materialise before 1962. The Corporation has experienced no difficulties in disposing of its lead in competition with imported material and as regards zinc which it obtains from Japan where its concentrates are processed on 'toll' basis, arrangements have been made for its sale to Tata Iron and Steel Co. Ltd. and Indian Iron and Steel Co. Ltd. at prices fixed by Government from time to time. Thus, the problem facing the Corporation is not one of tariff protection. The question of protection to the nickel anode industry was raised at the time of the last inquiry in 1957 by Binani Metal Works Private Ltd., Calcutta. This firm has, by its letter dated 16th July 1959, asked us to keep the matter in abeyance for some time. The representatives of the industry who attended the public inquiry this time also agreed that both these cases had better be deferred for some time. We have accepted this view.

3.2. In connection with the present inquiry Jaipur Metals and Electricals Ltd. suggested that the scope should be extended to include (i) cadmium copper rods and (ii) brass wires. Indian Non-ferrous Metals Manufacturers' Association has also asked for inclusion of brass wires in the scope of the inquiry. We have given this matter our careful consideration. Since cadmium copper rods are used in the manufacture of cadmium copper conductors, their case should appropriately be considered along with the bare copper conductors and A. C. S. R. industry. An inquiry into this industry is due to be held in 1960 and we have advised Jaipur Metals and Electricals to make out a case for inclusion of cadmium copper rods in that inquiry. As regards brass wires, the representative of Jaipur Metals and Electricals stated that the manufacture of free cutting brass wires was a new line developed subsequent to the last inquiry. He admitted that the indigenous industry is at present under no threat of competition from foreign products owing to (a) quantitative restrictions and (b) the customs duty of 40 per cent *ad valorem* leviable on imported brass wires, and therefore did not press for inclusion of the item. The present inquiry embraces only the products of lead, zinc, copper and brass listed in items (b) and (c) of paragraph 3.1. These articles are referred to as 'semi-manufactures' in trade circles as further processing and manufacture often follow before the products reach the ultimate consumer.

4.1. We took up for investigation towards the end of 1958 the question of continuance of protection to the lead and zinc sheets and strips industry beyond 31st December 1959 and issued questionnaires to the various parties interested in this inquiry. In order to bring the information up-to-date and also to collect relevant information regarding the other protected articles (sheets, rods, tubes and pipes of brass and

copper) included in the scope of the present inquiry, special questionnaires were issued to producers, importers and consumers in June/July 1959. The Development Wing was requested to furnish a detailed memorandum on the industry indicating the progress made by it since the last inquiry and its present position. Inquiries were made from the Geological Survey of India and the Indian Bureau of Mines regarding the steps taken by them to locate non-ferrous metals bearing mines and to prospect the commercially exploitable areas so located. The Indian Standards Institution was addressed regarding the progress made by it in formulating standard specifications for non-ferrous semi-manufactures covered by the scope of our inquiry. Information regarding c.i.f. prices was sought from the Collectors of Customs at principal ports. A press note was issued on 15th July 1959 inviting manufacturers, importers, consumers and others interested in the inquiry to obtain copies of the relevant questionnaires from the Commission and submit their replies. A list of firms, associations and Government departments to whom questionnaires and letters were issued and from whom replies or memoranda were received is given in Appendix I.

4.2. Dr. S. K. Muranjan, Shri J. N. Dutta and Shri R. S. Bhatt, Members, visited the factories of Metals and Ores Co. [a division of National Carbon Company (India) Ltd.] and National Pipes and Tubes Co. Ltd., Calcutta on 24th and 25th November 1958 respectively. Dr. S. K. Muranjan and Shri J. N. Dutta visited the factories of Indian Smelting and Refining Co. Ltd. and Kamani Metals and Alloys Ltd., Bombay on 5th September 1959. Shri K. R. P. Aiyangar, Chairman and Dr. Rama Varma, Secretary visited the two last named factories on 14th September 1959.

4.3. The following units were selected by us for purposes of costing. The names of our Cost Accounts Officers who examined their costs and the dates of their visits to these units are given below :—

Name of the unit	Products costed	Name of the Cost Accounts Officers who examined the cost of production	Dates of visit of the Cost Accounts Officer to the unit concerned
Metals & Ores Co., Calcutta	Zinc Strips	Shri S. K. Basu, Senior Cost Accounts Officer.	From 3rd to 11th November 1958.
Kamani Metals and Alloys Ltd., Bombay.	Copper, Brass and Zinc sheets.	Shri P. M. Menon, Cost Accounts Officer.	August and September 1959.
National Pipes and Tubes Co. Ltd., Calcutta.	Copper and Brass rods and tubes.	Shri E. S. Natarajan, Asstt. Cost Accounts Officer.	From 19th to 24th August 1959.

4.4. Representatives of Metals and Ores Co. met the Commission on 22nd August 1959 and discussed the various aspects of the inquiry in so far as it related to zinc sheets and strips manufacture. A public



inquiry into the industry was held on 17th September 1959 at the Commission's office in Bombay. A list of persons who attended the public inquiry is given in Appendix II.

4.5. The Director of Industries, Bombay State met the Commission on 19th September 1959 and explained the method of distribution of imported copper and zinc metals amongst small scale units in the State.

5.1. In our last Report we made certain recommendations on matters other than tariff. Those recommendations and the extent to which they have been implemented by the interests concerned are given below :—

**Implementation of recommendations made in the last Report.**

5.2. "Government should take steps to obtain release from their commitments under the General Agreement on Tariffs and Trade so that they may have complete freedom to impose customs duties which may be found necessary on unwrought lead and zinc."

We were informed by the Ministry of Commerce and Industry in December 1957 that necessary action to obtain release from commitments under the GATT in respect of import duty on unwrought lead and zinc would be taken after a decision has been reached in principle on an examination of the level of production in the country and other relevant factors that protection should be given to these industries. As indicated in paragraph 3.1. above, we have deferred, for the time being, investigation into the question of grant of protection to these industries.

5.3. "The Development Wing should take early steps to re-assess the installed capacity for non-ferrous alloys on single shift of individual units, having regard to the type and capacity of the furnaces used by them."

"The Development Wing should take early steps to re-assess the rolling, extruding and drawing capacity of each of the licensed units for non-ferrous semi-manufactures having regard to the capacity of the finishing mills."

The Development Wing has stated that it called for technical details for assessment of capacity from the units which are borne on its list but the information received was not adequate. In its view the work which requires inspection on the spot by a technical officer will have to wait till its staff position improves.

5.4. "The Iron and Steel Controller should, in concert with the customs authorities, take steps to ensure that no recoverable tinplate scrap is exported."

The Ministry of Steel, Mines and Fuel has stated that instructions have been issued to Collectors of Customs and Inspectors at the Iron and Steel Controller's offices at Calcutta, Bombay and Madras to the effect that they should exercise greater vigilance in passing Nos. 2 and

3 sheet cuttings for shipment and should not allow for export consignments which contain even a few stray pieces of tinplate in any form. In addition, a system of periodical inspection of scraps pressed at exporters' godowns has been introduced.

- 5.5. "The Iron and Steel Controller should undertake a survey of tinplate scrap arisings in the country and take appropriate measures to make them available to the detinners after satisfying himself that the three units at present engaged in the recovery of tinplate scrap arisings have the necessary plant and machinery to recover tin to the maximum extent."

We are informed by the Ministry of Steel, Mines and Fuel that the raw material requirements of the detinning industry have never been looked after by the Iron and Steel Controller nor has there been any control over production or price of recovered tin. The Ministry has suggested that the Development Wing, which is concerned with the development of the detinning industry, should ask in processing units to sell their tin scrap to the nearest detinning factory at prices to be mutually agreed upon. We understand that the Development Wing has issued necessary instructions in this regard to all tin processing units and detinners. The representative of the Indian Non-ferrous Metals Manufacturers' Association who attended our inquiry, informed us that no complaints were received by the Association from the detinning industry regarding the supply of tin scrap.

- 5.6. "Intensive efforts should be made to locate non-ferrous metals bearing mines and to prospect commercially the exploitable areas so located."

We are informed by the Indian Bureau of Mines that it has taken up the investigation of copper ore deposits at Khetri, Daribo area of Rajasthan and Rangpo in Sikkim for assessing the potentialities of these deposits. It has also included the investigation of copper ores in the Gani area of Andhra Pradesh in the field season of 1959-60. As regards lead and zinc, the Bureau has already examined the potentialities of lead and zinc ores at Zawar mines for the establishment of a zinc smelter at Udaipur, Rajasthan. The lead deposit of Taragarh Hill and Parsola and the deposit of tin ores in Bhilwara District of Rajasthan have also been examined by the said Bureau. The Geological Survey of India has also recently established a base metal wing for the development of non-ferrous metals.

- 5.7. "All the units in the industry should take steps to introduce a proper system of costing as early as possible and report to the Commission before 30th June 1958 in order to enable it to undertake detailed investigation into the claim of the non-ferrous semi-manufactures industry to continuance of protection."

This recommendation was brought to the notice of the manufacturers concerned both by us and by the Development Wing. In reply, only a few firms expressed their willingness to introduce a proper costing system while many others reported that they have not implemented this

recommendation so far. The Indian Non-ferrous Metals Manufacturers' Association appointed in December 1958 Messrs. Robson, Morrow & Co., Bangalore to conduct a survey in the works of the member-firms of the Association with a view to installing a proper costing system in the factories of such members as are interested. The above firm of cost consultants has submitted a report to the Association which has informed us that the scheme is being recommended to the interested members.

6.1. There are four main forms of wrought products covered by our inquiry, namely, sheets, strips, rods and tubes and pipes. Both sheets and strips are thin flat material of over 0.006 in. (or 0.15 mm) upto and including 0.375 in. (or 9.52 mm) in thickness. A sheet is at least over 18" wide and is supplied in short lengths while a strip may be of any width and is usually supplied in coil but may be flat or folded. Rods are often round but may be hexagonal or square in section. Tubes and pipes are hollow products.

Process of manufacture of the articles covered by the

6.2. There are three principal processes, i.e., rolling, extruding and drawing, by which the refined metal is reduced in size and shaped in the proper form. Rolling consists of applying pressure to the metal by passing it through rollers. A process is called hot rolling or cold rolling according as the metal rolled is hot or cold. The hot or the cold metal is passed several times between the rolls till it is reduced to the correct thickness. Thereafter it is annealed, trimmed and scaled. Cold rolling secures less reduction in each operation but gives greater accuracy and smoothness. Strips are produced in this country from hot rolled sheets by further cold rolling and finishing. Extrusion is the process of forcing hot metal through a die by means of a ram; if a hollow shape is required for subsequent working, a mandrel is placed in the centre of the die. The first stage in the manufacture of tubes is the production by hot working of a hollow intermediate product called a shell which is then drawn to a tube of the required gauge and size. Drawing consists of pulling metal through a die.

7.1. **Sheet and strip.**—Copper and brass sheet and strip are extensively used in the automobile industry in the manufacture of radiators, gaskets and accessories of all kinds. They are also used in the electrical industry in the manufacture of lamp holders, switches, etc. Zinc strip is largely used for making dry battery cells while zinc sheets are mainly used in the photo-engraving trade where they are being replaced gradually by aluminium. Lead sheets were previously used extensively as teacheast lining but have been practically replaced by aluminium. At present their main use is in the chemical industry, in rayon plant, in pickling baths, etc. Sheets for this purpose must be prepared from chemically pure lead (99.9% purity) and be free from such impurities as phosphorous and sulphur which react with dilute acids.

Uses

**7.2. Rods.**—One of the more important uses of copper rods, other than electrolytic, is in the manufacture of locomotives where they act as stays between the fire box and steel outer shell of the locomotive. Brass rods are used for machining into such things as bolts, nuts and screws.

**7.3. Tubes and Pipes.**—Tubes and pipes of copper and brass are used for conveying steam, water, gas, oil, petrol, sugar liquors, etc. Tubes of smaller diameters are used in refrigeration plant, internal combustion engines etc.

#### 8.1. No. of units and capacity.

8.1.1. At the time of the last inquiry, we obtained information about capacity and production of non-ferrous semi-manufactures like sheets, strips, rods, pipes and tubes, etc. in respect of 25 units borne on the list of the Development Wing. The capacity then claimed by the units was as follows :—

No.	Items	(In tons)
		Annual installed capacity
1	Copper/brass sheets, circles and strips	48,000
2	Copper/brass rods, sections (including extruded items)	5,000
3	Copper/brass pipes and tubes	360
4	Copper/brass wires for non-electrical purposes	1,958
5	Zinc sheets, strips, etc.	5,700
6	Lead sheets	1,098
7	Lead pipes and tubes	4,800

The above figures were exclusive of the capacity of ordnance factories, railway workshops and other establishments. We were not satisfied with the figures of capacity furnished by the several factories because since the same equipment could be, and was in fact, used for fabricating different non-ferrous metals, some duplication of capacity was possible. We, therefore, recommend that the Development Wing should re-assess the capacity for various products at each of the units. As stated in paragraph 5.3. it has not yet been possible for the Development Wing to undertake this work.

8.1.2. The following three units had also then obtained licences for substantial expansion or production of new items of non-ferrous semi-manufactures :—

Sl. No.	Name of the firm	Description of stores and capacity sanctioned	Substantial expansion or new items
1	Indian Smelting and Refining Co. Ltd., Bombay.	Brass/copper strips and brass coils—600 tons per annum.	New item.
2	Devidayal Sales Ltd., Bombay .	Seamless aluminium / brass/ copper pipes and tubes 3,600 tons per annum.	Ditto.
3	National Pipes and Tubes Co. Ltd., Calcutta.	Brass/copper solids—from 2,000 tons to 3,000 tons per annum. Brass/copper hollows from 300 to 900 tons per annum.	Substantial expansion.

The Indian Smelting and Refining Co. Ltd. has since installed a cold rolling mill with a capacity of 600 tons per annum and also added a re-rolling plant to produce thinner gauges upto 42 SWG. We understand from Devidayal Sales Ltd. that it has completed construction of its factory at Bhandup, Bombay and that machinery is under erection. It expects to go into production shortly. National Pipes and Tubes Co. Ltd. has stepped up its capacity for solids from 2,000 to 2,200 tons. It has also imported a combined drawing machine having a capacity of 300 tons per annum and has placed an order for another machine with a capacity of 500 tons.

8.1.3. We have received for the present inquiry data regarding capacity and production in respect of 24 units (20 borne on the register of the Development Wing and 4 small scale units) and they are given in Appendix III (A & B). The following table shows the total capacity claimed by these units for rolling and extruding various semi-manufactures :—

Sl. No.	Item	No. of units	Installed capacity of single shift basis per annum
			Tons
1	Sheet and strip rolling . . . . .	22	35,426
2	Rod rolling including rolling of strips in coils (copper & brass).	2	3,600
3	Extrusion :		
	(a) Solid }	1	2,200
	(b) Hollow }		100

N.B. (1).—The Development Wing has informed us that three units, viz., National Pipes and Tubes Co. Ltd., Kamani Metals & Alloys Ltd., and Metals and Ores Co. (a division of National Carbon Co. of India Ltd.) are at present registered with it for the manufacture of zinc sheets/strips with a total capacity of 5,700 tons per annum.

(2) There is one unit which manufactures items both under 1 and 3.

The information furnished in the above table does not represent the total installed capacity of the industry as it does not include the figures of capacity of (a) ordnance factories and railway workshops, and (b) the large majority of small scale and cottage units which are scattered in various parts of the country. Small scale and cottage units are mainly engaged in rolling copper or brass scrap into small circles for use in the manufacture of household utensils and hollow-ware. According to Western India Sheet Rollers' Association the aggregate capacity of these small rollers is about 10,000 tons per annum. Actual production at any particular time depends, however, on several factors, such as the availability of scrap, market demand for the different types of flats produced, etc.

**8.2. Production of non-ferrous semi-manufactures.**—Production of non-ferrous semi-manufactures by the 24 units during 1957, 1958 and the first five months of 1959 as reported by them is given in Appendix III(B). The following table shows the aggregate production during the above periods :—

		(In tons)		
Sl. No.	Non-ferrous semi-manufactures	1957	1958	1959 (Jan.-May)
<b>I. Copper :</b>				
(i)	Commercial sheets . . . . .	1,953.42	2,652.78	891.73
(ii)	Commercial circles . . . . .	207.13	284.68	117.29
(iii)	Industrial strips in cut-lengths . . . . .	278.60	350.84	142.13
(iv)	Industrial strips in coils . . . . .	303.60	348.63	137.53
(v)	Rods other than electrolytic . . . . .	224.85	254.05	27.65
(vi)	Pipes and tubes . . . . .	58.00	52.85	19.60
<b>II. Brass :</b>				
(i)	Commercial sheets . . . . .	16,020.84	17,664.59	5,963.23
(ii)	Commercial circles . . . . .	3,575.82	3,914.49	2,003.35
(iii)	Industrial strips in cut-lengths . . . . .	681.20	1,177.46	728.31
(iv)	Industrial strips in coils . . . . .	99.70	325.71	217.18
(v)	Rods . . . . .	1,456.20	1,621.70	425.95
(vi)	Pipes and tubes . . . . .	7.35	7.45	1.80
<b>III. Zinc :</b>				
(i)	Sheets . . . . .	56.75	64.05	13.95
(ii)	Strips . . . . .	1,740.55	2,016.75	1,087.85
<b>IV. Lead :</b>				
(i)	Sheets . . . . .	486.85	648.79	200.85
(ii)	Strips . . . . .	3.76	N.A.	N.A.

There was a slight over-all rise in the output of 1958 as compared with that of 1957. Nevertheless, most of the units could not work even single shift for shortage of raw materials. The industry is also under serious handicaps from the point of view of equipment and machinery and technical personnel. On the rolling side, although a few modern machines have recently been installed a number of old and obsolete furnaces, rolls, etc., are still operating at low levels of efficiency. In most of the units there is no arrangement for milling the rough surfaces of hot rolled sheets or for cold finishing. The extrusion side has been developed recently but owing to lack of experience in this line and also of equipment the range of products is limited to a few sizes only, such as rods above 1/16" in diameter and tubes below 16' in length. Indeed, the bulk of our requirements of tubes is met by imports. Manufacture of zinc strips has also been recently developed by one firm (Metals and Ores Co., Calcutta).

### 8.3. Expansion of capacity :

8.3.1. The Development Wing has informed us that R. S. Julli Ram Sham Lal, Calcutta which was a steel re-rolling unit has been given a licence to set up a new non-ferrous wing with a monthly capacity of 230 tons for the manufacture of aluminium/brass and copper rods. The following two units have applied for licences for the manufacture of extruded products :—

1. G. D. Binani, Calcutta . . . Copper/brass and copper base alloys/Aluminium tubes, rods and sections 1,000 tons of pipes and tubes per annum 500 tons of solids per annum.
2. Kamani Bros. (Private) Ltd. . . Copper/Brass pipes and tubes—150 tons of pipes and tubes per month, 50 tons of rods/sections per month

The application of (1) is reported to be under consideration by Government. As regards (2), the firm has received a licence under the Industries (Development and Regulation) Act, 1951 and has applied for an import licence for plant and machinery.

8.3.2. In addition, a few manufacturers have informed us that they are either expanding or planning to expand their capacity for diversification of production of non-ferrous semi-manufactures. Notable amongst them are (a) Kamani Metals and Alloys Ltd. which has under erection one four high mill, one bright annealing furnace and other equipments to increase its capacity for cold-rolled brass and copper strips in coils or in cut-lengths to 250/300 tons per month; this equipment, we are informed, will be utilised in the manufacture of thinner gauge strips upto 47 SWG, for use in gaskets, etc. (b) Devidayal Metal Industries Ltd., has plans to manufacture leaded brass, brass and copper strips and sheathings from 33 SWG to 42 SWG in mirror finished surface, bronze sheets and strips and zinc sheet.

8.4. **Diversification of production.**—The industry has diversified the range of its production during the last two years and has plans for further diversification. Nevertheless, there is yet a wide field to be

covered. Though the manufacture of zinc strips required for dry battery cells may be said to have been established in the country on a firm basis, none of the units has yet been able to produce satisfactory grades of highly polished copper or zinc sheets required for making finer process blocks. Similarly, no capacity has yet been established to produce lead sheets of width above 6' required by the chemical industry. Condenser tubes for ships and locomotives, heat exchanger tubes for oil refineries and tubes of smaller diameter for refrigeration plant and internal combustion engines are also not being produced in the country. The list is not exhaustive. We understand that the demand for all these items is growing and that the equipments at present installed or in the process of installation by the industry are not generally suitable for the purpose. Besides, manufacture of these articles requires technical skill of a very high order which may not be available at present in the country and entrepreneurs wishing to undertake such manufacture may have to enter into technical collaboration with foreign firms for technical know-how, trained personnel, etc. We suggest that Government may extend to the industry necessary facilities and assistance in this behalf.

9.1. In our 1957 Report we did not attempt to estimate the domestic demand for non-ferrous semi-manufactures either for 1957 or for the future. We, however, indicated the quantities that were available for domestic consumption in 1956 made up of indigenous production and imports. The relevant figures relating to the articles which are included in the scope of the present inquiry are given below :—

			(In tons)	
Items	Production	Import	Quantity available for consumption	
<b>I. Copper :</b>				
(a) Rods other than electrolytic	*423	104	527	
(b) Sheets	1,650	65	1,715	
(c) Tubes & pipes	44	242	286	
<b>II. Brass :</b>				
(a) Rods	1,260	461	1,721	
(b) Sheets	10,916	..	10,916	
(c) Circles	2,599	..	2,599	
(d) Tubes	8	290	298	
<b>III. Lead :</b>				
Sheets.	38	309	347	
<b>IV. Zinc :</b>				
Sheets, strips and plates†	105	2,059†	2,164	

\* After deducting production of electrolytic rods—7,726 tons.

† After deducting imports of other manufactures of zinc—480 tons.



9.2. During the present investigation, we have received varying estimates of demand, current and future, for the items of non-ferrous semi-manufactures included in the scope of the present inquiry. These estimates as well as quantities available for consumption during 1957 and 1958 are given in Appendix IV (A & B). Briefly, the estimates indicate wide variations under sheets, circles and strips. The relevant figures for the various items under investigation are given below :—

Description	(In tons)	
	Estimates for	
	1959	1962
<b>I. Copper :</b>		
(i) Commercial sheets and circles . . . . .	Between 2,000 and 2,800	Between 2,500 and 3,400
(ii) Industrial strips in cut-lengths or coils . . . . .	Between 300 and 800	Between 600 and 1,000
(iii) Rods other than electrolytic . . . . .	750	1,000
(iv) Pipes and tubes . . . . .	750	1,000
<b>II. Brass :</b>		
(i) Commercial sheets and circles . . . . .	Between 14,000 and 28,000	Between 24,000 and 36,000
(ii) Industrial strips in cut-lengths or coils . . . . .	Between 2,000 and 4,000	Between 2,800 and 6,000
(iii) Rods . . . . .	2,500	3,000
(iv) Pipes and tubes . . . . .	1,000	1,500
<b>III. Zinc sheets and strips . . . . .</b>	Between 2,500 and 4,200	Between 2,500 and 6,000
<b>IV. Lead sheets and strips . . . . .</b>	Between 400 and 500	Between 400 and 800

As regards availabilities, the table below indicates the aggregate of (1) production of the 24 units referred to in paragraph 8.1.3. and (2) the balance of trade (import minus export) in the items under consideration as published in the Monthly Statistics of the Foreign Trade of India for 1957 and 1958 :—

	(In tons)	
	Total quantity available for consumption	
	1957	1958
1	2	3
<b>I. Copper :</b>		
(i) Commercial sheets and circles . . . . .	2,161	2,920
(ii) Industrial strips in cut-lengths or coils . . . . .	1,179	1,100
(iii) Rods other than electrolytic . . . . .	235	261
(iv) Pipes and tubes . . . . .	807	622

(In tons)		
1	2	3
<b>II. Brass :</b>		
(i) Commercial sheets and circles . . . . .	19,556	21,516
(ii) Industrial strips in cut-lengths or coils . . . . .	1,328	1,703
(iii) Rods . . . . .	2,043	1,759
(iv) Pipes and tubes . . . . .	706	672
<b>III. Zinc :</b>		
(i) Sheets . . . . .	57	64
(ii) Strips . . . . .	3,310	2,657
<b>IV. Lead :</b>		
(i) Sheets . . . . .	691	686
(ii) Strips . . . . .	4	N.A.

These figures, however, are not complete as they do not include the production of ordnance factories, a few units in the organised sector and practically the entire small scale sector of the industry.

9.3. Both the estimates and the availabilities of the several products were discussed during the public inquiry in order to arrive at dependable estimates of demand for 1959 and for the future. We are informed that production of commercial sheets of copper and brass in the organised sector of the industry is not encouraged. There was a large amount of unsatisfied demand for industrial sheets and extruded products of copper and brass (particularly pipes) during 1957 and 1958. Taking into consideration these factors as well as the trend of consumption during the last two years and the limited coverage in the statistics of production we have come to the conclusion that the domestic demand for 1959 for the various articles under consideration would be as follows :—

Description	Demand for 1959
	(Tons)
<b>I. Copper :</b>	
(i) Commercial sheets & circles . . . . .	4,000
(ii) Industrial strips in cut-lengths or coils . . . . .	1,200
(iii) Rods other than electrolytic . . . . .	300
(iv) Pipes and tubes . . . . .	800
<b>II. Brass :</b>	
(i) Commercial sheets and circles . . . . .	25,000
(ii) Industrial strips in cut-lengths or coils . . . . .	2,000
(iii) Rods . . . . .	2,000
(iv) Pipes and tubes . . . . .	750
<b>III. Zinc sheets and strips</b> . . . . .	3,000
<b>IV. Lead sheets and strips</b> . . . . .	700

As regards the future, we are of the view that having regard to the growing popularity of aluminium and stainless steel utensils, the demand for commercial sheets and circles of copper and brass is not likely to go up and will remain more or less stationary at the 1959 level. As regards industrial strips, extruded products of copper and brass, zinc and lead sheets and strips the demand is bound to grow with the development of industries and the increase at the end of the next three years will be of the order of 15 per cent. of the 1959 level.

10.1. Copper, zinc and lead are the principal raw materials used in the production of semi-manufactures included in the scope of the present inquiry. Scraps of copper and brass are also used in the manufacture of flat products.

**Raw materials.**

Zinc is not produced in the country and is entirely imported. As regards copper and lead, our annual production has been of the order of 7,800 and 3,300 tons, respectively. Since our current requirements of copper and lead are considerably larger, the gap between indigenous production of ingots and our total requirements is filled by imports. No control is exercised over the sale and distribution of indigenous copper, lead and brass or scraps of these metals. As regards imported metal, sale and distribution by importers is regulated by the Non-ferrous Metals Control Order, 1958. The present position in regard to each of these metals is stated below :—

10.2. **Copper.**—There has been no significant development in the indigenous production of virgin copper subsequent to our last inquiry in 1957. Indian Copper Corporation Ltd., Ghatsila, continues to be the only unit engaged in the manufacture of fire-refined copper with an installed capacity of 7,800 tons per annum. The Corporation has a rolling mill where it rolls the bulk of its metal into hot rolled and cold finished copper and brass sheets. The balance of about 1,800 tons of copper ingots was till recently sold to the Director General of Supplies and Disposals, but as the contract was not renewed after July 1959, it is now sold to Kamani Metals and Alloys Ltd. and Indian Smelting and Refining Co. Ltd. Mention was made in our last Report (1957) of the plan of the Corporation to set up a plant for the manufacture of electrolytic copper with a capacity of 8,400 tons per annum. We are informed that negotiations on this project have reached and advanced stage and that the Corporation has approached Government for the necessary import licence. We also understand that one Shri G. D. Binani, Calcutta, has applied for a licence to undertake manufacture of fire-refined copper from blister copper with an installed capacity of 5,000/6,000 tons a year and that the scheme is under the consideration of Government. Indigenous production and imports of copper since 1957 were as follows :—

					(In tons)		
Year					Production	Imports	Total
1957	.	.	.	.	7,848.00	44,514.55	52,362.55
1958	.	.	.	.	7,857.60	50,016.00	57,873.60
1959	.	.	.	.	2,436.00	14,699.55	17,135.55
(Jan.—April)							

**10.3. Lead and zinc.**—Metal Corporation of India Ltd., Calcutta is the only unit manufacturing virgin lead with an annual capacity of 6,000 tons. In the absence of smelting facilities for zinc in the country the firm exports its zinc concentrates to Japan on "toll" basis and imports back metallic zinc. It has a scheme to instal (a) a zinc smelter with a capacity of 15,000 tons of electrolytic zinc per annum and (b) a lead smelter with an installed capacity of 12,000 tons of lead per annum to be manufactured from imported lead concentrates. The following table shows the production and imports of lead and zinc from 1957 :—

(In tons)

Year	Lead			Zinc	
	Production	Imports	Total	Production	Imports
1957 . .	3,174.00	13,848.50	17,022.50	..	48,008.20
1958 . .	3,334.80	11,175.35	14,510.15	..	57,338.65
1959 (Jan.—April) . .	1,448.90	7,104.75	8,553.65	..	15,274.15

**10.4. Supply position of copper, zinc, and lead for the semi-manufacture industry.**—The present position regarding the supply and distribution of these metals is stated in the following paragraphs :—

**10.4.1. Copper.**—As stated in paragraph 10.1, the bulk of requirements is met by imports. Sheet rollers borne on the list of the Development Wing were given during the licensing period April—September 1959, import licences upto 90 per cent of their consumption in 1956. In addition, supplementary licences on an *ad hoc* basis were issued to them to import metal for meeting urgent demands for industrial sheets and strips. Provision was also made in the licensing policy for April—September 1959 for import of this metal from Dollar and Soft Currency areas by established importers upto 40 per cent. of one-half of their best year's imports. Further, some quantities of Canadian copper were received under the Colombo Aid Programme and some quantity was imported by the State Trading Corporation. Thus the organised sector of the industry, except Indian Copper Corporation Ltd., obtained its supplies of copper mainly from imports against actual user's licences. As regards small scale sector and cottage units, supplies were made from imports made by established importers and the State Trading Corporation. We understand that with effect from the licensing period October 1958—March 1959, the Ministry of Commerce and Industry has been reserving at the commencement of each licensing period a certain quota from imports effected by established importers and the State Trading Corporation for distribution among small scale units through State Governments. Sheet rollers and manufacturers of brass or copper utensils—even those which have no melting or rolling arrangements—are

eligible for allocation of copper. Their requirements are assessed on the basis of 33 per cent. of certified six-monthly consumption of 1957 in the case of units which were in existence in 1957; as regards the units which came into existence during the period from 1st January to 1st April 1958, the assessment is made at 50 per cent. of 33 per cent. of the certified average monthly consumption for the quarter of 1958. The requirements of copper by manufacturers of brass utensils are assessed on the basis of copper content in the utensils, that is, at 60 per cent. The assessed requirements of the several States are compiled in the Ministry of Commerce and Industry and State-wise allocations of imported copper reserved for small scale and cottage units are intimated to the concerned State Government. On receipt of this intimation the State Director of Industries makes allotments to individual units and communicates them to the Controller of Non-ferrous Metals. Thereafter, the Controller issues permits in favour of allottees who then buy the allotted quantity of copper from importers named in the permit.

10.4.2. **Zinc.**—We have stated in paragraph 3 that zinc obtained by Metal Corporation of India Ltd., from Japan is sold to Tata Iron and Steel Co. Ltd. and Indian Iron and Steel Co. Ltd. The requirements of this metal for non-ferrous semi-manufactures are, therefore, met entirely by imports. Rollers of brass sheets borne on the list of the Development Wing, which obtained licences for copper, were given licences during the period April—September 1959 to import zinc upto the quantities required for the product mix. Manufacturers of zinc sheets and strips were also given licences for import of virgin metal. In addition, provision was made for the import of metal by established importers from Dollar and Soft Currency areas during the licensing period April—September 1959 on a quota of 15 per cent. of one-half of best year's imports. The State Trading Corporation has also imported some quantity of zinc. Imports by established importers and part of the quantity imported by the State Trading Corporation were reserved for distribution amongst small scale and cottage units on the recommendations of State Directors of Industries. The distributing authorities for zinc are (1) Joint Chief Controller of Imports and Exports, Bombay in respect of the units located in the States of Bombay, Uttar Pradesh, Punjab, Rajasthan, Delhi, Jammu and Kashmir and Kerala and (2) Joint Chief Controller of Imports and Exports, Calcutta for the rest of the country. All small scale and cottage units which have been in production for over a year on 1st January 1958 and which consumed zinc in ingot form are eligible for allotment of zinc. In addition, job rollers which were not rolling this metal for their own consumption are also eligible for allotment. The requirements of small scale and cottage units are, after scrutiny by the concerned State Director of Industries, forwarded to the Ministry of Commerce and Industry, where they are compiled. State-wise allotments of zinc are communicated by the Ministry to the State Governments and the distributing authorities concerned. Actual allotments to individual units are then made by the distributing authorities in consultation with the concerned State Governments. These individual allotments are then communicated to the Bombay Metal Exchange in the case of Bombay Zone

and the East India Metal Merchants' Association in the case of rest of India, which then nominate the importer from whom an allottee should receive his metal.

**10.4.3. Lead.**—This metal is available indigenously to the extent of a little over 3,000 tons which is sold in the market. It is also imported by the State Trading Corporation and by sheet rollers, etc., borne on the list of the Development Wing. No separate provision for import has been made to meet the requirements of small scale sheet rollers who buy their requirements of indigenous metal in the market.

**10.4.4. Brass scrap and ingots for the Small Scale Sector.**—We are informed that the National Small Industries Corporation has recently introduced a scheme for supplying brass scrap and ingots to *bona fide* small scale manufacturing units out of the stock available with Ordnance factories. Depots will be opened at Calcutta, Madras, Bombay and Delhi to supply the needs of the small scale units located in the respective areas. In addition, provision has been made for import of copper scrap and brass scrap by established importers for supply to small scale and cottage units and the distribution of such scrap is effected in the same way as zinc ingot.

**10.5. The Indian Non-ferrous Metals Manufacturers' Association** has represented that manufacturers in the organised sector are experiencing considerable difficulties in obtaining their requirements of raw materials regularly and in adequate quantities with the result that they are unable to plan their production, effect deliveries in time and control prices. It has urged that while sheet rollers borne on the list of the Development Wing are granted actual users' licences for raw materials on the basis of their 1956 production which had been the lowest for past several years, manufacturers of other products are given supplies on the basis of their 1957 production. This, according to the Association, has placed the sheet rolling industry at a disadvantage. A more or less similar representation was also made by Western India Sheet Rollers' Association and Kamani Metals and Alloys Ltd. They have pleaded that raw materials should be allotted on the basis of best year's production and manufacturers should also be enabled to build up buffer stocks equivalent to their three months' requirements in order that there should be no disruption of production. There were also allegations at the public inquiry that many small scale units, which used scrap in the manufacture of sheets and utensils, were selling metal ingots in the market and our attention was drawn to reports in the press about market quotations of copper and zinc. It was pointed out that the margin between the landed cost and the market price was about Rs. 1,000 per ton in the case of copper and Rs. 1,200 per ton approximately in the case of zinc and the point urged before us was that many small manufacturers found it more profitable to continue operating with scrap and to dispose of in the market their copper and zinc ingots. Statements were made to the effect that supplies were coming to Bombay from such far off places as Banaras, Amritsar, Jagadhri, etc. The several issues raised by manufacturers and their Associations were discussed at length during the public inquiry and also with the Director of Industries, Bombay. The

representative of the Development Wing explained that the present policy was that the organised sector should go in for increased production of industrial sheets and strips and that Government would be prepared to consider sympathetically applications for import of metals required for the purpose. He added that the present allocation of 90 per cent. of consumption in 1956 should be adequate and that the organised sector should not increase its production of commercial sheets and circles beyond 1956 level. The representatives of sheet rollers contended that while maximisation of output of industrial products should be the desideratum, the current demand for such sheets and strips is rather limited and, therefore, for sometime to come, they should be assisted with sufficient raw materials to keep their equipment fully employed.

10.6. We observe that the control at present exercised under the Non-ferrous Metals Control Order, 1958, is confined to the sale of the metal by importers and no check is exercised about its disposal after the metal has been sold by importers. The Director of Industries, Bombay, admitted that this was a serious loophole and that it was possible for small scale units which have no melting or rolling arrangements to dispose of their ingots in the market and to produce utensils and hollow-ware with circles bought in the market or produced from metal scrap. He assured us that steps were being taken to tighten the control by calling for periodical returns and making spot inspection of the units from time to time so as to ensure that small scale units which have received supplies of imported ingots actually used them. The allegations received by us, however, related mainly to the disposal of metal ingots by small scale units in places like Amritsar, Jagadhri, Banaras, etc. It has not been possible for us either to assess the extent to which such sales have been taking place or to locate the areas from where the bulk of supplies have been coming to important industrial centres like Bombay and Calcutta. Nevertheless, the material furnished at the public inquiry and the information supplied by the Director of Industries, Bombay indicated that the loophole in the Non-ferrous Metals Control Order was being exploited by a certain section. The supply position for small scale units is expected to improve in the future as the quotas for established importers, who are required to sell their imported metals to small scale units, have been increased substantially during the licensing period October 1959—March 1960. Quotas for copper have been raised to 75 from 40 per cent. and those for zinc to 20 from 15 per cent. in the last period. Lest these increased supplies should also find their way in the open market, it is essential that State Governments should strengthen without delay their control and supervision over the small scale units which receive imported copper and zinc in order to ensure that these metals are actually used by the recipients for their own production and are not allowed to be traded in. We suggest that the Union Government should impress on the State Governments concerned the importance of exercising greater vigilance over the activities of small scale units in their respective territories for preventing unauthorised sales of imported copper and zinc.

10.7. As regards extruded products and zinc strips, the manufacturers appear to be reasonably satisfied with the licences issued to them. They, however, pressed for larger imports in coming years to meet the growing demand in the country for their products.

11.1. In our Report (1957) we observed that generally there was no complaint regarding the quality of commercial brass sheets and strips but that the quality of industrial types of sheets and strips which were used by important industries like automobiles, electrical accessories, electrical lamps, dry batteries and telephone industries left much scope for improvement. The following two specific complaints were then reported to us, namely, (i) the chemical composition was not controlled according to specifications and (ii) the articles were of uneven quality and lacked finish. The manufacturers have now informed us that they have taken several steps subsequent to the last inquiry to improve the quality of their products. They have also claimed that they have received practically no complaints and that in one or two stray cases where such complaints were received, prompt remedial action was taken by them.

11.2. The consensus of opinion of consumers as expressed in their replies to our questionnaire is that the quality of the semi-manufactures under consideration is satisfactory. Three important consumers have, however, expressed the view that domestic products are still inferior to imported ones. Indian Telephone Industries Ltd. has stated that it has noticed some internal defects such as seams and separation of layers in brass sheets supplied by certain manufacturers, surface finish was not very good and small pits with tendencies to become more pronounced during processing were also observed. The company has also stated that it has been unable to obtain its requirements of spring temper brass strips in coil which should be perfectly flat when uncoiled. Bharat Electronics Ltd. has represented that it has been experiencing difficulties in procuring perfectly flat copper sheets from indigenous sources and that sheets supplied by one of the domestic manufacturers were in either bent or warped condition. The India Government Mint, Bombay, has stated that most of the indigenous annealed copper sheets were not free from small pitting on the surface or patches formed in the process of annealing. These defects were discussed at the public inquiry. The Indian Smelting and Refining Co. Ltd. has plans to instal a milling plant for removing all surface defects in its sheets. Kamani Metals and Alloys Ltd. is erecting electronic equipment to ensure uniformity of thickness and avoidance of air holes, seams, etc. in its sheets and strips. The representatives of the industry pointed out that the demand for perfectly flat copper sheets was so small that they found it uneconomical to instal a hydraulic stretcher for the purpose.

11.3. We are satisfied from the evidence available that there has been considerable improvement in the quality of industrial sheets and strips of copper and brass and that by installing modern machinery and adopting improved techniques the industry is trying to improve the



quality of its products. The quality of extruded products of brass and copper (solids and hollows) and of zinc strips is comparable with that of imported products.

**11.4. Standard specifications.**—We are informed by the Indian Standards Institution that it has already published standards for :

- (i) Naval brass rods, bars and sections ;
- (ii) Brass tubes for general purposes ;
- (iii) Rolled brass plate, sheet, strip and foil ;
- (iv) Lead sheets for general purposes.

All these standards are at present under revision. The Institution has also under consideration the question of formulating standard specifications for the other products included in the scope of our present inquiry.

**11.5. Certification Marks Scheme.**—None of the units has so far applied for certification marks in respect of the products for which the Institution has published standard specifications. Since the emphasis is on the production of articles of quality, the industry should, in its own interest, go in for certification marks for its products.

**12.1. A summary of the import control policy pursued by Government from time to time since October 1957 in respect of non-ferrous semi-manufactures included in the scope of our present inquiry is given in the statement in Appendix V. The policy has been restrictive in respect of those items of semi-manufactures which are produced in sizeable quantities in the country.**

**12.2. Imports.**—A statement showing countrywise imports of non-ferrous semi-manufactures during 1957, 1958 and the first four months of 1959 is given in Appendix VI. The following table shows the total imports of various semi-manufactures during these periods.

Name of the item	1957		1958		1959 (Jan—April)	
	Quantity	Value	Quantity	Value	Quantity	Value
	2	3	4	5	6	7
	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.
<b>I. Sheets &amp; Strips :</b>						
1. Copper sheets, strips & plates.	11,669	34,10,092	8,016	18,72,233	2,898	6,51,609
2. Brass sheets, strips & plates.	10,737	24,57,122	3,884	8,47,667	1,571	3,74,324
3. Zinc plates	772	80,422	141	21,437	..	..
4. Zinc sheets and strips.	31,390	31,56,118	12,809	10,52,184	1,597	1,45,864
5. Lead sheets for teachests.	150	14,455	..	..	..	..

1	2	3	4	5	6	7
	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.
6. Lead sheets not for teachests.	3,926	4,06,803	750	58,240	3	371
<i>II. Circles :</i>						
1. Copper	74	17,827	..	..	..	..
2. Brass	1	997	..	34	..	..
<i>III. Rods :</i>						
1. Copper rods other than electrolytic.	222	1,02,478	131	30,933	23	9,989
2. Brass rods	11,632	19,42,337	2,752	3,72,524	1,015	1,54,598
<i>IV. Pipes &amp; Tubes</i>						
1. Copper tubes	14,970	45,40,565	11,392	29,05,007	3,398	8,89,487
2. Brass pipes and tubes.	13,978	37,45,824	13,299	28,08,316	4,687	10,68,126

The principal sources of supply were U.K., West Germany, Italy, Belgium and Australia.

13.1. The export control policy pursued by Government in regard to non-ferrous semi-manufactures under examination in this Report is that semi-manufactures of brass were freely licensed for export upto September 1958, after which no licence is required for export. Exports of copper sheets, circles, strips and plates are allowed on a quota basis and the quota fixed for the period January—September 1958 from all Indian ports was 1·500 tons. The validity of the shipment period of the unutilised portion of this quota was subsequently extended upto 30th September 1959. Copper bars, rods and sections, pipes and tubes, however, are not allowed to be exported. Lead strips are not controlled for export. Zinc sheets and strips are not allowed to be exported.

13.2. **Exports.**—Quantity and value of exports of non-ferrous semi-manufacturers by destination during 1957, 1958 and 1959 (January—April) as recorded in the Monthly Statistics of the Foreign Trade of India are given in Appendix VII. The following table shows the aggregate exports during these periods.

Name of the item	1957		1958		1959 (Jan-April)	
	Quantity	Value	Quantity	Value	Quantity	Value
	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.
1. Copper sheets, plates & strips.	..	30	340	60,282	38	11,432
2. Brass plates, sheets and strips.	774	1,54,471	1,243	2,24,900	256	54,229
3. Brass circles	18	3,068	40	9,211	..	..
4. Brass rods	..	40	1	318	..	..
5. Copper tubes	..	300	..	..	..	..
6. Brass pipes & tubes	..	281	..	232	..	..

It will be observed that barring brass plates, sheets and strips the exports of which amounted to 38·7 tons valued at Rs. 1·54 lakhs in 1957 and 62·2 tons valued at Rs. 2·25 lakhs in 1958, exports of other non-ferrous semi-manufactures were negligible. Exports were mostly made to neighbouring countries like Ceylon, Iran, Afghanistan and Pakistan.

14. The semi-manufactures of copper, lead, zinc and brass which are included in the scope of the present inquiry are assessed to duty under items Nos. 64(3), 64(5), 67(1), 67(2), 67(4), 68(2), 68(4), 70A and 70(5) of the First Schedule to the Indian Tariff Act, 1934. Relevant extracts from the Schedule showing the current rates of protective duty are given below :

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The United Kingdom	A British Colony	Burma	
1	2	3	4	5	6	7	8
64(3)	Copper rods, other than electrolytic copper rods :					Free	
	(a) of British manufacture	Protective	40 per cent <i>ad valorem</i>	..	..	..	December 31st, 1959.
	(b) Not of British manufacture	Protective	50 per cent <i>ad valorem</i>	..	..	..	
64(5)	Copper sheets, pipes & tubes :						
	(a) of British manufacture	Protective	30 per cent <i>ad valorem</i>	..	..	..	December 31st, 1959.
	(b) Not of British manufacture.	Protective	40 per cent <i>ad valorem</i>	..	..	..	
67(1)	Lead sheets for tea-chests	Protective	35 per cent <i>ad valorem</i>	..	..	Free	December 31st, 1959.
67(2)	Lead sheets other than sheets for tea-chests	Protective	25 per cent <i>ad valorem</i>	..	..	Free	December 31st, 1959.
67(4)	Lead strips	Protective	35 per cent <i>ad valorem</i>	..	..	Free	December 31st, 1959.

1	2	3	4	5	6	7	8
68(2)	Zinc sheets not otherwise specified.	Protective	25 per cent <i>ad valorem</i>	..	..	Free	December 31st, 1959.
68(4)	Zinc strips	Protective	35 per cent <i>ad valorem</i>	..	..	..	December 31st, 1959
70A	Brass sheets, pipes and tubes.	Protective	35 per cent <i>ad valorem</i>	..	..	..	December 31st, 1959.
70(5)	Brass rods	Protective	40 per cent <i>ad valorem</i>	..	..	Free	December 31st, 1959.

15.1. Our Cost Accounts Officers examined costs of production at the following factories for the non-ferrous articles specified against each :—  
**Costs of production and estimates of fair ex-works prices of indigenous semi-manufactures referred to in paragraph 14.**

Name of the factory	Products costed	Period investigated
1. Kamani Metals & Alloys Ltd.	Commercial brass sheet (61.5/38.5) —28 lbs. Commercial copper Sheet—28 lbs. Industrial brass sheet (65/35) —20 SWG. Industrial copper sheet—24 SWG Industrial zinc sheet—15 SWG.	1st July 1957 to 30th June 1958.
2. Metals and Ores Co., Division of National Carbon Co.(India) Ltd.	Zinc strips	For the year ended 25th December 1957 and for the half year ended 25th June 1958.
3. National pipes and Tubes Co. Ltd.	Copper rod—1½" dia. Copper rod—1½" dia. Copper rod—2" dia. Arsenic copper tube—1½"×10 SWG Arsenic copper tube—2"×10 SWG Pure copper tube—1"×10 SWG Pure copper tube—1½"×10 SWG Pure copper tube—2"×10 SWG Brass rod—7/8" dia. Brass rod—1½" dia. Brass rod—2" dia. Brass tube—1½" X16 SWG	1st April 1957 to 31st March 1958.

We have not costed lead sheets. The output is concentrated in the small scale sector and the sheets produced (nor for teachests) are of shorter widths. Their prices are not comparable with those of imported sheets which are of larger widths of 6' and above. Production of lead strips and lead sheets for teachests has been negligible in the past and has probably now been discontinued.

15.2. None of the units has made arrangements for recording cost data in sufficient detail for determining easily the actual cost of production of different types, sizes and gauges of sheets, strips, rods and tubes. However, since Metal and Ores Co. (Item 2 of paragraph 15.1.) is engaged in the production of only one item, that is, zinc strip, direct expenses chargeable to the product were available readily from its books. In the case of National Pipes and Tubes Co. Ltd. (Item 3) it was possible for our Cost Accounts Officer, with the help of the data made available to him, to determine fairly accurately the cost of production of the several products selected. As regards Kamani Metals and Alloys Ltd., we observed in paragraph 7.7 of our last Report (1957) that the data available were not sufficient to arrive at the actual cost of production of various types of sheets produced by the company and recommended that all units in the industry should take steps to introduce a proper system of costing as early as possible and report to us before 30th June 1958 to enable us to undertake detailed investigation into the claims of the non-ferrous semi-manufactures industry to continuance of protection. Notwithstanding this recommendation, Kamani Metals and Alloys Ltd. has done nothing to improve the collection of relevant data for working out direct expenses chargeable to each product. Indeed, the material furnished initially was so inadequate that it was not possible for our Cost Accounts Officer to arrive at the cost of production of the several products selected. We drew the attention of the representatives of the firm to the inadequacy of the data supplied to our Cost Accounts Officer, warned them of the danger of their case going by default for lack of factual data and asked them to employ such staff as was necessary to compile the data required for working out the cost of production during 1957-58 (July 1957—June 1958). The data eventually furnished, though not quite satisfactory, were sufficient for our Cost Accounts Officer to work out fair ex-works costs for 1957-58. The representatives of Kamani Metals and Alloys Ltd. explained that owing to certain re-organisation in the company they had been unable to implement our recommendation so far and promised to introduce a proper costing system at an early date. Incidentally, it was this firm that took the initiative for referring the case of the non-ferrous metals industry to the Tariff Board. We repeat the recommendation in our last Report that all units in the industry should show due awareness of their obligations as a protected industry and introduce a proper system of costing without delay. The introduction of this system should be reported to us by 30th June 1960. The reports of our Cost Accounts Officers are forwarded as confidential enclosures to this Report.

15.3. Our estimates of fair ex-works prices of the semi-manufactures for the period from 1959 to 1962 are given below :—

15.4.1. **Kamani Metals and Alloys Ltd.**—We give below a statement showing (a) our estimates of fair ex-works prices for the period 1959—62 and (b) the cost of production for 1957-58 as worked out by our Cost Accounts Officer :

*M/s. Kanani Metal & Alloys Ltd. Bombay*

(per Cwt.)

Particulars	Commercial Brass Sheet—28 lbs.— 61·5/38·5		Commercial Copper Sheet—28 lbs.		Industrial Brass Sheet—20 SWG— 65/35		Industrial Copper Sheet—24 SWG		Zinc Sheets—15 SWG	
	1957-58	Estimates for 1959-62	1957-58	Estimates for 1959-62	1957-58	Estimates for 1959-62	1957-58	Estimates for 1959-62	1957-58	Estimates for 1959-62
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Raw materials . . . . .	113·79	136·97	152·25	179·97	116·95	140·78	152·25	179·97	58·19	69·55
2. Conversion charges excluding packing and depreciation . . . . .	19·05	21·95	16·36	19·11	53·09	42·40	85·58	64·10	91·15	70·16
3. Depreciation . . . . .	3·15	3·15	2·74	2·80	9·38	5·85	16·39	9·72	18·16	11·29
4. Packing . . . . .	1·00	1·00	1·00	1·00	3·00	3·00	3·00	3·00	3·00	3·00
5. Cost of Production . . . . .	136·99	163·07	172·35	202·88	182·42	92·03	257·22	256·79	170·50	154·00
6. Return . . . . .	..	8·59	..	9·93	..	9·47	..	11·50	..	8·02
7. Fair Ex-works price . . . . .	..	171·66	..	212·81	..	201·50	..	268·29	..	162·02

The factors which we have taken into account in constructing our estimates are briefly stated below :—

**15.4.2. Production.**—We have estimated the total production (including the production of zinc sheets) at 80,000 cwts. a year (50,000 cwts. of commercial and 30,000 cwts. of industrial varieties). This represents a reduction of approximately 20 per cent of the actual output achieved during 1957-58. The company expects a drastic cut in the production of commercial variety owing to Government's policy of diverting such production to the small scale sector.

**15.4.3. Raw materials.**—The cost of raw materials has been computed at the latest rates paid by the factory. The melting and other losses have been kept at 5.38 per cent., i.e., the same figure that has been admitted by our Cost Accounts Officer for 1957-58.

**15.4.4. Repairs and Maintenance.**—The expenditure under these heads has been estimated at 85 per cent of that incurred during 1957-58.

**15.4.5. Return.**—This has been calculated at 10 per cent on 'capital employed'. For this purpose the element of working capital has been assessed as equivalent to four months' cost of production.

**15.5.1. National Pipes and Tubes Co. Ltd.**—We give below a statement showing (a) our estimate of fair ex-works prices for the three years 1959—62 and (b) the actual costs of production for 1957-58 :

	(Per Cwt.)							
	Brass Tube 1½" × 10 SWG 70/30		Brass Rod 7/8" diameter 60/40		Copper Tube 1" × 10 SWG		Copper Rod 1½" diameter	
	Actuals July, 57 —June, 1959— 58	Estima- tes for 1959— 62	Actuals 1957-58	Estima- tes for 1959— 62	Actuals 1957-58	Estima- tes for 1959— 62	Actuals 1957-58	Estima- tes for 1959— 62
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Raw materials	124.45	145.72	115.85	136.11	146.84	170.56	146.84	170.56
Conversion charges excluding depre- ciation.	173.08	170.12	49.30	44.80	150.14	144.38	73.09	65.74
Depreciation	24.86	15.61	8.45	5.07	21.96	13.61	12.07	7.21
Packing	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Cost of production	322.72	331.78	173.93	186.31	319.27	328.88	232.33	243.84
Return	..	33.38	..	13.43	..	30.42	..	18.42
Fair ex-works price per cwt.		365.16		199.74		359.30		262.26

The factors which we have taken into account in arriving at the above estimates are briefly stated below :—

**15.5.2. Production.**—We have estimated the production of solids at 2,500 tons *per annum* during the next three years against actual production of 2,000 tons during 1957-58. This figure was arrived at after discussion with the Company's representative of the technical difficulties which have to be taken into consideration while a process of expansion is going on. As regards hollows, we have assumed future production at 100 tons per annum.

**15.5.3. Raw materials.**—The cost of raw materials has been computed at the latest prices paid by the factory which were higher than those prevailing during 1957-58. The higher costs have more than neutralised the economies in conversion charges arising from the higher production assumed for the future.

**15.5.4. Repairs and maintenance.**—We have assumed that expenses under this head would go up by 10 per cent. in the future as some of the equipment have been in service for a long time and are in need of urgent repairs.

**15.5.5. Return.**—This has been calculated at 10 per cent. on 'Capital employed'. For this purpose the element of working capital has been assessed as equivalent to four months' cost of production.

**15.6. Zinc strips manufactured by Metals and Ores Company.**—A statement is placed below showing (a) the actual cost of production during 1957 and the first six months of 1958 and (b) our estimates of fair ex-works price for the three-year period 1959—61 :—

	Actuals		Estimates for
	1957	First half of 1958	1959—61
	Production 3,898,473 lbs.	Production 2,016,917 lbs.	Assumed production 4,500,000 lbs.
	Rs. per lb.	Rs. per lb.	Rs. per lb.
Raw materials . . . . .	0.653	0.471	0.565
Conversion charges excluding depreciation . . . . .	0.205	0.187	0.220
Depreciation . . . . .	0.078	0.070	0.052
Packing . . . . .	0.005	0.006	0.006
Cost of production per lb. . . . .	0.941	0.734	0.843
Cost of production per cwt. . . . .	105.39	82.21	94.42
Return per cwt. . . . .	..	..	11.20
Fair ex-works price per cwt. . . . .	..	..	105.62



The factors which we have taken into account in arriving at the above estimates are briefly stated below :—

- (1) Annual production has been assumed at 4,500,000 lbs., that is, 94 per cent. of the capacity of the factory on single shift.
- (2) The cost of spelter has been calculated on the basis of L.M.E. quotations on 21st August 1959 including a premium of £ 5 per ton.
- (3) Return has been calculated at 10 per cent on capital employed' as assessed by us.

16. A statement showing c.i.f. prices, landed costs, etc. of recent imports of sheets, strips and extruded products as furnished by Collectors of Customs and Indian Non-ferrous Metals Manufacturers' Association is given in Appendix VIII. A few quotations were furnished by National Pipes and Tubes Co. Ltd., Calcutta, Binani Commercial Co. (Private) Ltd. and Estrela Batteries Ltd., Bombay. For purposes of comparison with the fair ex-works prices of indigenous products in order to arrive at the quantum of protection needed by the industry, we have accepted the following c.i.f. prices from U.K. except in the case of zinc strips the c.i.f. price of which relates to Belgium.

1. Commercial copper sheet 28 lbs.	N.A.
2. Commercial Brass sheet 28 lbs 61·5/38·5	N.A.
3. Industrial copper sheet 24 SWG	Rs. 240·83 per cwt.
4. Industrial Brass sheet 20 SWG—65/35	Rs. 204·05 per cwt.
5. Zinc sheet—15 SWG	Rs. 86·27 per cwt.
6. Zinc strips (Belgium)	Rs. 95 per cwt.
7. Brass tube—1½" × 16 SWG (70/30)	Rs. 266·76 per cwt.
8. Brass rod—¾" dia, 60/40	Rs. 158·66 per cwt.
9. Copper tube 1" × 10 SWG	Rs. 256·66 per cwt.
10. Copper rod 1¼" dia.	Rs. 230·66 per cwt.

17. The following statement gives a comparison of fair ex-works prices of indigenous (a) sheets, strips, rods and tubes of copper and brass, and (b) zinc sheets and strips with landed costs without duty of imported products.

**Comparison of the fair ex-works prices of indigenous sheets, strips, rods and tubes of copper, brass and zinc with landed costs without duty of imported products.**

*Statement showing comparison of the fair ex-works prices of indigenous sheets, strips, rods etc.*

(Per cwt.)

	1	2	3	4	5	6	7	8	9	10	11
		Commer- cial copper sheet 28 lbs. 61.5/38.5	Commer- cial Brass sheet 28 lbs. 61.5/38.5	Industrial Copper sheet 24 SWG	Industrial Brass sheet 20 SWG. 65/35	Copper Rod 1½" diameter	Brass rod ¾" dia. 60/40	Copper tubes 1" x 10" SWG	Brass tube 1½" x 16" SWG 70/30	Zinc sheet 15 SWG.	Zinc strip
1. C. i. f. prices	Rs.	N.A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
2. Clearing charges	Rs.	..	..	2.40	2.04	2.31	1.59	2.57	2.67	0.86	0.95
3. Landed cost ex-duty	Rs.	..	..	243.23	206.09	232.97	160.25	259.23	269.43	87.13	95.95
4. Fair ex-works price	Rs.	212.81	171.66	268.29	201.50	262.26	199.74	359.30	365.16	162.02	105.62
5. Disadvantage of (4) vis a vis (3), that is (4-3)	Rs.	..	..	25.06	(-)-4.59	29.29	39.49	100.07	95.73	74.89	9.67
6. (5) as a percentage of (1)	Rs.	..	..	10.41	(-)-2.25	12.70	24.89	38.99	35.89	86.81	10.18

18.1. It will be observed from the statement in paragraph 17 above that based on the latest landed costs without duty of imported products, the following rates of protective duty are required for the protection of the several semi-manufactures covered by the present inquiry :—

Name of the article	Quantum of protective duty required	Current rate of protective duty
1. Copper rods other than electrolytic copper rods.	13% <i>ad valorem</i>	40% <i>ad valorem</i> in the case of rods of British manufacture and 50% <i>ad valorem</i> in the case of rods not of British manufacture.
2. (a) Copper sheets—commercial grade.	Could not be determined /as there were no imports and c.i.f. quotations were also not available.	30% <i>ad valorem</i> in the case of sheets of British manufacture and 40% <i>ad valorem</i> in the case of sheets not of British manufacture.
(b) Copper sheets—industrial	10% <i>ad valorem</i>	Ditto.
3. Lead sheets for teachests	Not costed	35% <i>ad valorem</i>
4. Lead sheets other than sheets for teachests.	Not costed	25% <i>ad valorem</i>
5. Lead strip	Not costed	35% <i>ad valorem</i>
6. Zinc sheets not otherwise specified	87% <i>ad valorem</i>	25% <i>ad valorem</i>
7. Zinc strips	10% <i>ad valorem</i>	35% <i>ad valorem</i>
8. (a) Brass sheets—commercial	Could not be determined as there were no imports and c.i.f. quotations were also not available.	Ditto.
(b) Brass sheets—industrial	(—) 2% <i>ad valorem</i>	Ditto.
9. Copper pipes and tubes	39% <i>ad valorem</i>	30% <i>ad valorem</i> in the case of pipes and tubes of British manufacture and 40% <i>ad valorem</i> in the case of pipes and tubes not of British manufacture.
10. Brass pipes and tubes	36% <i>ad valorem</i>	35% <i>ad valorem</i>
11. Brass rods	25% <i>ad valorem</i>	40% <i>ad valorem</i>

Thus the current rates of duty are adequate for all products except zinc sheets and pipes and tubes of copper and brass. Industrial brass sheets enjoy an advantage as the fair ex-works price is lower than c.i.f. price of imported sheets while the duty required to equate the fair ex-works price of industrial copper sheets with the landed cost, ex-duty, of imported sheets is 10 per cent. only.

**18.2.1. Sheets and strips of brass and copper.**—It will be seen from paragraphs 3.2 and 7.7 of our last Report (1957) that the industry then asked for continuance of protection in respect of industrial sheets of brass and copper but in the absence of a precise definition of commercial and industrial sheets, we recommended continuance of protection to both Industrial and commercial sheets of brass and copper as it would have been administratively difficult to operate a scheme of protection confined to industrial sheets only. Considering the fact that industrial brass sheets, which require more time and skill for production, enjoy an advantage over imported sheets, it may be assumed that commercial brass sheets which are cheaper products should be able to hold their own even if there had been imports from abroad. As regards copper sheets, the quantum of protection needed by industrial sheets is nominal (10% *ad valorem*) and is lower than the prevailing rates of duty [40% *ad valorem* (standard) and 30% *ad valorem* (preferential)]. Accordingly commercial sheets which require less skill for production and are cheaper should be able to withstand competition from abroad, if there had been imports of such sheets. After careful consideration of all relevant factors, we have come to the conclusion that protection to copper and brass sheets (commercial and industrial) is no longer necessary. We recommend, therefore, that protection to these sheets be discontinued on the expiry of the current period of protection on 31st December 1959. As regards strips, we have not been able, for lack of data, to determine the quantum of protection needed by copper and brass strips. Such strips are required in the manufacture of vital components of machinery and their production is growing rapidly. The industry will have to invest fresh capital for equipping itself with proper machinery, technical know-how, etc. We have recommended discontinuance of protection from copper and brass sheets including industrial sheets. As, however, the production of industrial strips has not yet reached the same stage of development as sheets, we consider that there is need for some measure of duty advantage for strips lest as a result of deprotection of sheets a tariff anomaly should develop. If at any time in future, the revenue duties on sheets should fall below the present levels, there should be separate tariff items for copper and brass strips. At present copper strips are assessed as 'copper wrought and manufactures of copper not otherwise specified' to revenue duties of 40 per cent *ad valorem* (standard) and 30 per cent *ad valorem* (preferential) under I.C.T. item No. 64. Brass strips are assessed to a revenue duty of 35 per cent *ad valorem* under I.C.T. item No. 70.

**18.2.2. Lead sheets and strips.**—We have stated in paragraph 15.1. that production of lead sheets for teachests and lead strips has negligible. The use of lead sheets in teachest lining has practically been replaced by aluminium sheets and since the latter sheets are being produced in the country, tariff protection will be of no help to lead sheets to recover their lost market. In the circumstances we recommend that protection to lead sheets for teachests [I.C.T. item No. 67(1)] and lead strips [I.C.T. item No. 67(4)] may be discontinued on the expiry of the current period of protection on 31st December 1959. As regards lead sheets, other than sheets for teachests, their demand from chemical

industries is rapidly developing and the producers will have to invest fresh capital in equipments for the production of wider sheets conforming to specifications relating to quality and chemical composition. Since withdrawal of protection at this stage may be a disincentive for further development, we recommend that protection to lead sheets other than sheets for teachests at the existing rate of duty (25 per cent. *ad valorem*) may be continued for a further period of three years from 1st January 1960.

**18.2.3. Zinc sheets not otherwise specified.**—The quantum of protection required by indigenous sheets is 87 per cent. *ad valorem*. Since actual production during 1957-58 was a bare 7 tons, the estimates for the future which have been worked out on the basis of actuals could not be taken as representative for the industry. We are not, therefore, in favour of raising the existing rate of duty (25 per cent. *ad valorem*). We may also add that the industry has not yet been able to produce highly polished sheets required for photo engraving or for fine line block making on a commercial scale. In order to encourage the industry to improve the quality of its products by adopting better technique, etc. we recommend that protection at the existing rate of duty be continued for a further period of three years from 1st January 1960.

**18.2.4. Zinc strips.**—The quantum of protection indicated is 10 per cent. *ad valorem* while the current rate of duty is 35 per cent. *ad valorem*. The degree of protection is, however, based on the fact that at present the virgin metal is allowed to be imported duty-free and till indigenous sources are fully developed, import of zinc will have to be so made. We do not, therefore, recommend either withdrawal of protection or lowering of duty at this stage as the industry which has large plans for expansion might be seriously handicapped in implementing them. Accordingly we recommend that protection at the existing rate of duty be continued for a further period of three years from 1st January 1960.

**18.2.5. Copper rods other than electrolytic copper rods [Item 64(3)] and brass rods [Item 70(5)].**—The quantum of protection required for copper rods is 13 per cent. *ad valorem* and that for brass rods 25 per cent. *ad valorem*. In both cases the quanta indicated are lower than the existing rates of duty. Not many manufacturing units have yet entered the field in which self-sufficiency seems to be attainable. We do not therefore recommend either withdrawal of protection or lowering of duty as either measure may have the effect of discouraging further expansion of the industry. Accordingly we recommend that protection at the existing rates of duty to copper rods other than electrolytic copper rods and brass rods be continued for a further period of three years from 1st January 1960.

**18.2.6. Copper pipes and tubes [I.C.T. Item No. 64(5)] and brass pipes and tubes [I.C.T. Item No. 70A].**—Here the degrees of protection indicated [i.e., 39 per cent. *ad valorem* (preferential) for copper pipes and tubes and 36 per cent. *ad valorem* for brass pipes and tubes] are

higher than the existing rates of duty. Since the industry enjoys additional protection from quantitative restrictions, it is not necessary to raise the protective rates of duty to the levels indicated by our comparison of fair ex-works prices of indigenous products of a single manufacturing unit with the landed costs ex-duty of imported products. We recommend that protection at the existing rates of duty be continued for a further period of three years to copper pipes and tubes and brass pipes and tubes.

18.3. If the recommendations in the foregoing paragraphs are accepted, the following amendments will be necessary in I.C.T. Item Nos. 64(3), 64(5), 67(2), 68(2), 68(4), 70 A and 70(5) :—

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The United Kingdom	A British colony	Burma	
64(3)	Copper rods, other than electrolytic rods—						Free
	(a) of British manufacture.	Protective	40 per cent <i>ad valorem</i>	..	..		December 31st, 1962
	(b) not of British manufacture.	Protective	50 per cent <i>ad valorem</i>	..	..		December 31st, 1962
64(5)	Copper pipes and tubes—						Free
	(a) of British manufacture.	Protective	30 per cent <i>ad valorem</i>	..	..		December 31st, 1962
	(b) not of British manufacture.	Protective	40 per cent <i>ad valorem</i>	..	..		December 31st, 1962
67(2)	Lead sheets other than sheets for tea-chests.	Protective	25 per cent <i>ad valorem</i>	..	..	Free	December 31st, 1962
68(2)	Zinc sheets not otherwise specified.	Protective	25 per cent <i>ad valorem</i>	..	..	Free	December 31st, 1962
68(4)	Zinc strips . . .	Protective	35 per cent <i>ad valorem</i>	..	..	..	December 31st, 1962
70A	Brass pipes and tubes	Protective	35 per cent <i>ad valorem</i>	..	..	..	December 31st, 1962
70(5)	Brass rods . . .	Protective	40 per cent <i>ad valorem</i>	..	..	Free	December 31st, 1962

19.1.1. **Commercial sheet of brass and copper.**—At the public inquiry we were informed that three major manufacturers of commercial sheets, namely, Indian Copper Corporation Ltd., Kamani Metals and Alloys Ltd., and Indian Smelting and Refining Co. Ltd., have entered into an arrangement to eliminate price competition *inter se*. Under this arrangement, representatives of the three manufacturers meet at the end of every month and fix *minimum* prices to be charged by all of them for their commercial sheets of copper and brass during the following month. We are informed that these prices are calculated by adding to the average London Metal Exchange quotations for copper and zinc metals during the month, certain fixed amounts to cover (i) freight and insurance charges on raw materials, (ii) conversion charges and (iii) profit. Prices are fixed f.o.r. Bombay and prices at other centres are arrived at by making certain adjustments in the basic prices. The prices fixed are minimum prices below which the manufacturers should not sell their commercial sheets. We were informed that this arrangement came into force during a slump in the market towards the end of 1956 and is designed primarily to protect the interests of the manufacturers.

19.1.2. During the public inquiry it was represented before us that though the other producers are under no obligation to sell their sheets at the prices fixed by the three big producers, they have been following more or less the limits set by the latter. The representatives of consumers stated that while Indian Copper Corporation Ltd. has been publishing its prices in the Press and marketing its sheets also at these prices, the other two manufacturers have been charging a premium over those prices. Both Kamani Metals and Alloys Ltd. and Indian Smelting and Refining Co. Ltd. denied the allegation. The selling systems adopted by these three concerns are that Indian Copper Corporation maintains regional offices in Bombay, Calcutta, Madras and Delhi. These offices have appointed distributors for sale of the company's products in their respective areas. The maximum selling prices ex-godown which can be charged by distributors are fixed by the Corporation at the beginning of each month and are announced in the Press, and its distributors are required to sell at those prices and to submit to the Corporation every month sales invoices. Further, a large part of sales by distributors is controlled by the Corporation under a quota system which is claimed to ensure that its products reach genuine consumers. The annual requirements of each consumer are screened by the company on the basis of the recommendations of the Development Wing in the case of scheduled units and State Directors of Industries in the case of non-scheduled and small scale units and quota certificates are issued to each consumer to obtain its requirements from distributors. Kamani Metals and Alloys Ltd. markets its commercial sheets through its territorial agents in Bombay, Madras, Andhra, Kerala and Delhi who are paid commission on sales. It also supplies commercial sheets directly to big consumers. Indian Smelting and Refining Co. Ltd. has appointed one stockist at Bombay and three indenting agents for Delhi, Punjab and South India for the sale of its commercial sheets. It also deals directly

with consumers in other areas. The stockist at Bombay caters to consumers in Bombay and Poona and a few commission agents, who are allowed a commission of Rs. 2 per cwt. The company fixes prices at which the stockist should sell its products and also exercises control over his activities by requiring him to submit daily sales reports and copies of sales invoices every week. Neither Kamani Metals and Alloys Ltd. nor Indian Smelting and Refining Co. Ltd. publishes its sales prices in the Press. In the circumstances the possibility of outstation agents or stockists charging higher prices on occasions cannot be ruled out. We recognise that production of commercial sheets and circles will tend to be concentrated to a greater degree in the future in the small scale and cottage sector and that large units like Kamanis or Indian Smelting and Refining Co. may not hold a dominant position for long. At the same time we do not foresee that our foreign exchange position will enable us to relax in the near future import restrictions to an extent which will make copper, zinc or brass easily available in adequate quantities. In the circumstances in the wider interest of consumers it is important to ensure that neither manufacturers nor their distributors indulge in anti-social activities in regard to prices and distribution of commercial sheets and circles. We recommend that both Kamanis and Indian Smelting and Refining Co. Ltd. should announce their prices like Indian Copper Corporation, and also ensure that their agents or stockists charge only the list prices to consumers.

**19.2. Sale of industrial sheets and strips of brass and copper.**—We are informed that most of the companies have appointed dealers or agents to sell industrial sheets of standard sizes (14" × 48") and they are paid commission at rates varying from 5 to 7½ per cent. Special types are manufactured against orders and prices are fixed by negotiation.

**19.3. Sale of zinc strips.**—Metals and Ores Co. sells its strips through Industrial Products Sales Division of National Carbon Co. (India) Ltd. and allows a commission of 10 per cent. A quantity discount on sale value is, however, allowed to customers on their total annual purchases. During the public inquiry the representatives of Estrela Batteries alleged that the prices charged by Metals and Ores Co. for zinc strips were about 30 to 40 per cent. higher than those of the corresponding imported product. The representative of the latter concern present at the inquiry refuted the allegation by stating that the prices quoted by his company are based on the average London Metal Exchange prices for zinc metal and that presumably at the time when the supplies were made to Estrela Batteries, the L.M.E. prices for zinc metal might have been higher. Both the representatives, however agreed to settle the matter between them.

**19.4. Sale of rods and pipes and tubes.**—National Pipes and Tubes Co. Ltd. which is the major producer of these articles has appointed dealers for local sales. These dealers are not paid any commission. As regards outstation sales, the company has appointed agents in various parts of the country who are paid commission at 2½% or 1% according



as the sales are effected to private parties or Government/Semi-Government bodies. No complaint was received about prices but there was a general complaint that delivery periods quoted by the company were unduly long.

20. We have stated in paragraph 5.3 that shortage of qualified personnel has prevented the Development Wing from undertaking spot check of capacities claimed by the several units borne on its list.

#### **Miscellaneous**

As regards small scale sector, it is engaged mainly in utensil manufacture, rolling of sheets and circles, wire drawing, etc. No assessment of their capacities appears to have been made by either the State Directors of Industries concerned or the Development Commissioner for Small Scale Industries. Many units both large and small, make use of metal scrap in the rolling of commercial sheets and circles and in the manufacture of utensils. The requirements of non-ferrous metals like copper, zinc and lead are met almost entirely by imports and this position is not likely to alter in the near future. Having regard to the foreign exchange position, imports will have to be restricted and the limited quantity of imported metals that will be available from time to time will have to be distributed carefully in a manner that the best use is made of them. At the public inquiry we were informed that while unauthorised trading in imported metals (copper and zinc) had been taking place, many units in the organised as well as in the small scale sector had, due to shortage of raw materials, been unable to work even single shift. This indicates that the distribution of imported metal amongst several units needs to be improved with due regard to (a) capacity of individual units and (b) their need for imported metals. We have emphasised in paragraph 10.5 the importance of exercising closer supervision over small scale and cottage units which have been supplied with imported metals for their own use. As regards scheduled units, we are informed that they submit to the Development Wing periodical returns about their capacity, production, sales, stocks of raw materials and finished products, etc. The representative of the Development Wing, who attended the public inquiry, admitted that though these returns serve a useful purpose, they did not enable him to check whether the capacity was properly utilised or whether the imported materials were put to the best use. Nor did it enable him to assess how far some of the products, which are imported at present, could be manufactured satisfactorily with the existing equipments. These fabricators produce a variety of articles which are used in the manufacture of vital components of important industries like aircraft, automobiles, locomotives, armaments, etc. In the circumstances the requirements of raw materials of the existing units in the organised sector ought to be examined with care. It is also important to assess (a) whether all the units are running efficiently and, if not, what steps should be taken to improve their efficiency, (b) what additional capacities should be set up in the light of developments that are taking place in other sectors of the economy and (c) whether in the context of our foreign exchange position, any priorities should be fixed in the licensing of fresh units as between (i) rollers of strips, plates and sheets, (ii) extruders, etc. All this work

requires examination by experts and we suggest that necessary action in this behalf may be taken by Government as early as possible.

21. Our conclusions and recommendations are summarised below :  
**Summary of conclusions and recommendations**

(i) The current domestic demand is estimated at 4,000 tons for copper sheets and circles (commercial); 1,200 tons for copper strips (industrial) in cut lengths or coils; 300 tons for copper rods, other than electrolytic; 800 tons for copper pipes and tubes; 25,000 tons for brass sheets and circles (commercial); 2,000 tons for brass strips (industrial) in cut lengths or coils; 2,000 tons for brass rods; 750 tons for brass pipes and tubes; 3,000 tons for zinc sheets and strips and 700 tons for lead sheets and strips. The demand for commercial sheets and circles of copper and brass in future will remain more or less stationary at the 1959 level. The future demand for industrial strips, extruded products of copper and brass, zinc and lead sheets and strips will, at the end of the next three years, register an increase of the order of 15 per cent. of the 1959 level.

[Paragraph 9.3]

(ii) There has been considerable improvement in the quality of industrial sheets and strips of copper and brass. The quality of extruded products of brass and copper (solids and hollows) and of zinc strips is comparable to that of imported products.

[Paragraph 11.3]

(iii) All units in the industry should show due awareness of their obligations as a protected industry and introduce a proper system of costing without delay. The introduction of this system should be reported to the Commission by 30th June 1960.

[Paragraph 15.2]

(iv) Protection granted to copper and brass sheets, commercial and industrial [I.C.T. Item Nos. 64(5) and 70A], lead sheets for teachests [I.C.T. Item No. 67(1)] and lead strips [I.C.T. Item No. 67(4)] may be discontinued on the expiry of the current period of protection on 31st December 1959.

[Paragraphs 18.2.1 and 18.2.2]

(v) There is need for some measure of duty advantage for copper strips (I.C.T. Item No. 64) and brass strips (I.C.T. Item No. 70) lest as a result of deprotection of copper and brass sheets a tariff anomaly should develop. If at any time in future, the revenue duties on copper and brass sheets should fall below the present levels, there should be separate tariff items for copper and brass strips.

[Paragraph 18.2.1]

(vi) Protection granted to lead sheets other than sheets for teachests [I.C.T. Item No. 67(2)], zinc sheets, not otherwise specified [I.C.T. Item No. 68(2)], zinc strips [I.C.T. Item No. 68(4)], copper rods,

other than electrolytic copper rods [I.C.T. Item No. 64(3)], brass rods [I.C.T. Item No. 70(5)], copper pipes and tubes [I.C.T. Item No. 64(5)] and brass pipes and tubes [I.C.T. Item No. 70A] may be continued for a further period of three years from 1st January 1960, at the existing rates of protective duties.

[Paragraphs 18.2.2 to 18.2.6]

(vii) If the recommendations for continuance or discontinuance of protection, as the case may be, are accepted, the existing I.C.T. Item Nos. 64(3), 64(5), 67(2), 68(2), 68(4), 70A and 70(5) should be amended as indicated in paragraph 18.3.

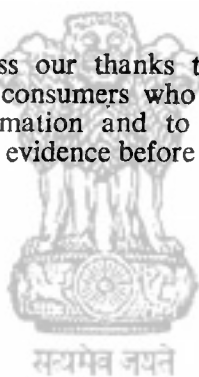
[Paragraph 18.3]

(viii) Kamani Metals and Alloys Ltd. and Indian Smelting and Refining Co. Ltd. should announce their prices of commercial sheets of brass and copper like Indian Copper Corporation and also ensure that their agents or stockists charge only list prices to consumers.

[Paragraph 19.1.2]

22. We wish to express our thanks to manufacturers, importers and consumers who furnished us with valuable information and to their representatives who gave evidence before us.

**Acknowledgments**



K. R. P. AIYANGAR,

*Chairman,*

S. K. MURANJAN,

*Member.*

J. N. DUTTA,

*Member*

R. S. BHATT,

*Member.*

RAMA VARMA,

*Secretary.*

BOMBAY;

The 24th October, 1959.

## APPENDIX I

[Vide Paragraph 4.1]

*List of firms, associations and Government Departments to whom questionnaires and letters were issued and from whom replies or memoranda were received*

\*Indicates those who replied in detail or sent memoranda.

†Indicates those who stated that they are either not dealing in the product or are not interested in the inquiry.

### (A) PRODUCERS :

- \*1. Indian Copper Corporation Ltd., Post Box No. 174, Calcutta.
- \*2. National Pipes and Tubes Co. Ltd., Stephen House, 4, Dalhousie Square (East), Calcutta-1.
3. Bengal Ingot Co. Ltd., 5, Hide Road, Kidderpore, Calcutta.
- \*4. Indian Smelting & Refining Co. Ltd., 159, Jamshedji Tata Road, Industry House, Churchgate Reclamation, Bombay-1.
- \*5. Jaipur Metals and Electricals Ltd., Near Railway Station, Jaipur.
- \*6. Jayant Metal Manufacturing Co., 924-A, Sayani Road, Bombay-28.
7. Agrawal Metal Works Private Ltd., Rewari, Punjab.
- \*8. Devidayal Metal Industries (Private) Ltd., P. B. No. 6215, Gupta Mills Estate, Reay Road, Bombay-10.
- †9. Hindusthan Metal Refinery & Rolling Mills Ltd., 124, Mint Street, Madras-1.
- \*10. Indian Metal & Metallurgical Corporation, 498, Mint Street, Madras-3.
- \*11. Kamani Metals & Alloys Ltd., Kamani Chambers, Nicol Road, Ballard Estate, Fort, Bombay-1.
12. Metal Rolling Works Ltd., 104, Sion Matunga Estate, Sion, Bombay.
13. Naran-Lala Metal Works Ltd., Near Railway Station, Navsari (Western Railway).
- \*14. Rashtriya Metal Industries Ltd., Kurla Road, P. O. J. B. Nagar (Andheri), Bombay-43.
15. Shri Mahesh Metal Works, Madanganj, Kishangarh.
- †16. Bhandary Metallurgical Corporation (Pvt.) Ltd., Vikhroli Bhandup P. O., Bombay-40.
- †17. Waldies Industries Private Ltd., Gillander House, Netaji Subhas Road, Calcutta-1.
- †18. Binani Metal Works Private Ltd., 38, Strand Road, Binani Buildings, Calcutta-1.
- †19. Indian Standard Metal Co. Ltd., Chinchpokli Cross Lane, Bombay-27.
- \*20. Metallica Works Private Ltd., 11, Worli Road, Bombay-18.
- †21. Bombay Metal Refinery, 24, Old Anjirwadi, Mazagoan, Bombay-10.
22. Delta Metal Refineries, 177, Muktaru Babu Street, Calcutta-7.
- †23. Eyre Smelting Private Ltd., 5, Hide Road, Kidderpore, Calcutta-23.
- \*24. Saru Smelting & Refining Corporation Ltd., Near Cantt. Railway Station, Meerut.
25. Bombay Metal & Alloy Mfg. Co. Ltd., Post Box No. 6210, Mazagoan, Bombay-10.
- \*26. Hoosini Metal Rolling Mill Private Ltd., Atlas Mills Compound, Reay Road, Bombay-10.
27. Deccan Metal Works, 20, Nagesh Peth, Poona-2.
28. Hind Metal Works, Udyamnagar, N. Satara.
29. Ganga Metal Refinery, 43, Strand Road, Calcutta.
30. J. B. Metal Industries, Sewree, Bombay.
31. Hindusthan Metal Works, Hatras (U. P.).
- †32. Ashok Metal Industries, Sewree Cross Road, Bombay-15.
- †33. A. K. Kallappa Chettiar & Sons, Broadway, Ernakulam.

34. Gargatti & Sons, Shahapur, Belgaum.
35. Elphinstone Metal Rolling Mills, New Prabhadevi Road, Nagusayani Wadi, Opp. Standard Mills, Bombay-13.
- †36. New United Metal & Engineering Works, near Andhra Valley Power Station, Dharavi, Bombay-17.
37. Lallubhai Amichand Private Ltd., 225/7, Tardeo Road, Bombay-7.
- \*38. Swastika Metal Works, Jagadhri, Punjab.
39. Balli Singh Bhagwan Singh, Bazar Kasera, Amritsar.
- \*40. Vasant Shivaji & Co., 1388, Shukrawarpet, Poona-2.
- \*41. Metals & Ores Co., Division of National Carbon Company (India) Ltd., Ilaco House, 1 & 3, Brabourne Road, Calcutta-1.
- \*42. Standard Metal Works (Pvt.) Ltd., 17, Tardeo Bridge (Low Level), Bombay-7.

#### (B) IMPORTERS:

- \*1. Imperial Chemical Industries (India) Private Ltd., I. C. I. House, 34, Chowringhee, Calcutta-1.
2. India Metal Agencies, India House, Opp. G. P. O., Fort, Bombay-1.
- \*3. Pragdas Mathuradas, 43, Strand Road, Calcutta.
4. Bombay Metal Syndicate, Gulalwadi, Kika Street, Bombay-4.
- \*5. Binani Commercial Co. (Private) Ltd., Managing Agents: P. Mathuradas (Bombay) Ltd., 28/30, Anantwadi, Bombay-2.
- \*6. Muni & Co., General Assurance Building, 232, Dr. D. Naorojee Road, Fort, Bombay-1.
7. Ram Kishan Metal Works, Ram Kishan Wadi, Railway Road, Bhandup, Bombay-40.
8. Babulal Chhaganlal, 67, Mumbadevi Road, Hanuman Bldg., Tambakanta, Bombay-3.
9. K. Virji & Co. Private Ltd., P. O. Box 953, 8, Horniman Circle, Fort, Bombay.
10. Devidayal (Sales) Private Ltd., Gupta Mills Estate, Reay Road, Darukhana, Bombay-10.
11. Federation of Non-Ferrous Metals Importers (India), 32, Second Bhoiwada, Bombay-2.
12. Metal Distributors Private Ltd., 12/18, Vithalbhai Patel Road, Bombay-4.
- †13. Hindusthan Products Corporation, Kanak Kunj, Plot No. 25, behind Aurora Cinema, Matunga, Bombay-19.
14. C. R. Chidambaram Chettiar, 12, South Car Street, Tirunelveli Town.

#### (C) CONSUMERS :

1. Dazzle Products Ltd., 138, Canning Street, Calcutta-1.
2. Krudd Industries Ltd., 20/21, Stephen House, Dalhousie Square, Calcutta-1.
- \*3. C. S. Pochee and Son, 586, Chira Bazar, Girgaum Road, Bombay-2.
- \*4. Hindusthan Motors Ltd., 8, Royal Exchange Place, Calcutta-1.
5. Premier Automobiles Ltd., Agra Road, Kurla, Bombay-37.
- †6. Mahindra & Mahindra Ltd., 5, Ferguson Road, Worli, Bombay-18.
- \*7. Ashok-Leyland Ltd., Bank of Mysore Buildings, N. S. C. Bose Road, Madras-1.
- \*8. Standard Motor Products of India Ltd., 29, Mount Road, Madras-2.
9. Automobile Products of India Ltd., Agra Road, Bhandup, Bombay-40.
- \*10. Tata Locomotive & Engineering Co. Ltd., Bombay House, 24, Bruce Street, Fort, Bombay-1.
- \*11. Simpson & Co. Ltd., 202/203, Mount Road, Madras-2.
12. Balmer Lawrie & Co. Ltd., 21, Netaji Subhas Road, Calcutta.
- \*13. Gurunanak Electro Mechanical Works, Phagwara.
14. Godrej & Boyce Mfg. Co. Ltd., Lalbaug, Parel, Bombay-12.
15. Annapurna Metal Works, 3, Asbu Biswas Road, Bhawanipur, Calcutta-25.
- \*16. Jugraj Parasmal & Co., 157, Jamli Mohalla, Bombay-3.
17. Saurashtra Metal Industries, Station Road, Shihor (Saurashtra).

18. Anand Chemicals, 8, Horniman Circle, Fort, Bombay-1.
19. Devidayal (Sales) Private Ltd., Gupta Mills Estate, Reay Road, Darukhana, Bombay-10.
20. Federation of Non-Ferrous Metals Importers (India), 32, Second Boiwada, Bombay-2.
21. Bharat Engineering Works, Bhaktinagar Station Road, Rajkot.
22. Ashok Company, 157, Netaji Subhas Road (Room No. 161), Calcutta-1.
23. Chandra Industries Private Ltd., 59, Cotton Street, Calcutta-7.
24. Ashok Metal Industries Ltd., 157, Netaji Subhas Road (Room No. 161), Calcutta-1.
25. Oriental Metal Pressing Works Pvt. Ltd., 131, Worli, Bombay-18.
26. C. R. Chidambaram Chettiar, 12, South Car Street, Tirunelveli Town, South India.
- \*27. Estrella Batteries Ltd., Post Box No. 6602, Bombay.
- †28. Kodak Limited, Kodak House, Dr. Dadabhai Naoroji Road, Bombay-1.
- †29. Allied Photographies Private Ltd., Kasturi Building, Jamshedji Tata Road, Bombay-1.

#### (D) GOVERNMENT CONSUMERS :

1. The Controller of Stores, Southern Railway, Perambur, Madras.
- \*2. The Controller of Stores, North Eastern Railway, Gorakhpur.
- \*3. The Controller of Stores, Western Railway, Headquarter Office, Churchgate, Bombay-1.
- \*4. The Controller of Stores, Central Railway, New Administrative Building, Bombay-1.
5. The Controller of Stores, Eastern Railway, Calcutta.
- \*6. The Controller of Stores, Northern Railway, Headquarters Office, Baroda House, New Delhi.
- \*7. The Controller of Stores, South Eastern Railway, Garden Reach, Calcutta-23.
8. Railway Integral Coach Factory, Perambur, Madras.
- \*9. Chittaranjan Locomotive Works, Chittaranjan, West Bengal.
10. Delhi State Road Transport, Delhi.
11. Road Transport Department, Government of Andhra, Murshidabad, Hyderabad (Deccan).
12. Home (Transport) Department, Government of West Bengal, Calcutta.
13. Bombay State Road Transport Corporation, Government of Bombay, Worli, Bombay-18.
14. B. E. S. T. Undertaking, Electric House, Colaba, Bombay-1.
15. Government Transport Central Workshop, Chromepet, Madras.
- \*16. The Mint Master, India Government Mint, Fort, Bombay-1.
- \*17. The Chief Controller of Printing & Stationery, Government of India, Printing & Stationery Department, New Delhi.
- \*18. Hindusthan Cables Ltd., P. O. Hindusthan Cables, Dist. Burdwan.
- \*19. Hindusthan Machine Tools Ltd., Jalahalli P. O., Bangalore.
- \*20. Hindusthan Aircraft Ltd., Hindusthan Aircraft Post, Bangalore.
- \*21. The General Manager, Indian Telephone Industries Ltd., Durvaninagar P. O., Bangalore.
- \*22. The Director General, Ordnance Factories, 6, Esplanade East, Calcutta.
- \*23. The Director General of Supplies & Disposals, National Insurance Building, Parliament Street, New Delhi.
- \*24. Bharat Electronics Ltd., Jalahalli P. O., Bangalore-13.
- \*25. Damodar Valley Corporation, Anderson House, Alipore, Calcutta-27.
26. Government Central Industrial Workshop, Post Office Road, Bangalore-1.
27. Hindusthan Shipyard Ltd., Gandhigram, Vishakapatnam, Andhra.
28. Hindusthan Housing Factory Ltd., Jangpura, New Delhi-13.
29. Indian Airlines Corporation, Banerjee Building, 21-B Asaf Ali Road, New Delhi.
30. Machine Tools Prototype Factory, Ambernath, Thana Dist., Bombay.

- \*31. Mysore Implements Factory, Post Box No. 4, Hassan.
- 32. National Instruments Factory, 15, Wood Street, Calcutta-6.
- 33. Government Electric Factory, Post Box No. 579, Mysore Road, Bangalore-2.
- \*34. Director General of Posts & Telegraphs, Ministry of Transport & Communication, Government of India, New Delhi.

(E) MANUFACTURERS' ASSOCIATIONS :

- \*1. Indian Non-ferrous Metals Manufacturers' Association, India Exchange, India Exchange Place, Calcutta-1.
- \*2. Western India Sheet Rollers' Association, Kamani Chambers, 32, Nicol Road, Ballard Estate, Bombay-1.

(F) DEALERS' ASSOCIATIONS :

- \*1. All India Non-ferrous Metalware Manufacturers' Association, Liberty Building, Marine Lines, Bombay-1.
- 2. Small Scale Non-ferrous Industries Association, P-11, Mission Row Extension, Calcutta-1.
- \*3. Bombay Metal Exchange Ltd., Gogate Mansion, Kika Street, Bombay-2.
- 4. Metal Trade and Industries Association, 31, Mirza Street, Bombay-3.
- 5. Calcutta Metal Merchants' Association, P-11, Mission Row Extension, Calcutta-1.
- 6. Northern India Metal Manufacturers' Association, Outside Gheemandi Gate, Amritsar.
- 7. Southern India Metal Distributors' Association, 127, Mint Street, Madras.
- 8. Metal Dealers' Manufacturers' Association, Jagadhri, Punjab.
- 9. Metal Industry Development Society, Jagadhri.
- 10. Mirzapur Non-ferrous Metals Manufacturers' Association, Tulsi Chowk, Mirzapur (U. P.).

(G) GOVERNMENT DEPARTMENTS :

- \*1. The Senior Industrial Adviser (Engineering), Ministry of Commerce & Industry, Development Wing, Metals Directorate (Metals Section), Udyog Bhavan, King Edward Road, New Delhi.
- \*2. The Development Commissioner, Small Scale Industries (Ministry of Commerce & Industry), Shahjahan Road, New Delhi.
- \*3. The Director, Indian Standards Institution, Manak Bhavan, 9, Mathura Road, New Delhi.
- \*4. The Director, Geological Survey of India, 27, Chowringhee, Calcutta-13.
- \*5. Collector of Customs, Bombay.
- \*6. Collector of Customs, Madras.
- \*7. Collector of Customs, Calcutta.
- \*8. Collector of Customs, Cochin.
- 9. The Minister (Economic) to the High Commission for India in U. K., Commerce Department, India House, Aldwych, London W. C. 2.
- 10. The Second Secretary (Commercial) to the Embassy of India in Belgium, 585, Avenue Louise, Brussels, Belgium.
- 11. The First Secretary (Commercial) to the Embassy of India in Germany, 262, Koblenzstrasse, Bonn (West Germany).

## APPENDIX II

[Vide Paragraph 4.4]

*List of persons who attended the Commission's public inquiry on 17th September, 1959*

### (A) Producers :

1. Shri H. R. Kamani -	}	Representing	Kamani Metals & Alloys Ltd., Kamani Chambers, Nicol Road, Ballard Estate, Fort, Bombay-1.
2. Shri P. C. N. Majumdar			
3. Shri S. C. Dutt		"	National Pipes & Tubes Co. Ltd., Stephen House 4, Dalhousie Square (East), Calcutta-1.
4. Shri A. G. Bhate	}	"	Metals and Ores Co., Division of National Carbon Co. (India) Ltd., Ilaco House, 1 & 3, Brabourne Road, Calcutta-1.
5. Shri P. C. Banerjee			
6. Mr. S. C. Gladstone	}	"	Indian Copper Corporation Ltd., Post Box No. 174, Calcutta-1.
7. Shri K. H. Mohite			
8. Shri S. P. Khaitan	}	"	Indian Smelting & Refining Co., Ltd., 159, Jamshedji Tata Road, Industry House, Churchgate Reclamation, Bombay-1.
9. Shri R. G. Jhavar			
10. Shri B. L. Dalmia			
11. Shri M. D. Mundhra			Rashtriya Metal Industries Ltd., Kurla Road, P. O. J. B. Nagar (Andheri), Bombay-43.
12. Shri N. M. Shah	}	"	Metal Rolling Works Ltd., 104, Sion Matunga Estate, Sion, Bombay-22.
13. Shri M. Ramakantan			
14. Shri R. G. Shah	}	"	Lallubhai Amichand Pvt., Ltd., 225/7, Tardeo Road, Bombay-7.
15. Shri R. M. Shah			
16. Shri K. C. Shah	}	"	Jayant Metal Manufacturing Co. Ltd., 924-A, Sayani Road, Bombay-28.
17. Shri M. L. Rao			
18. Shri C. A. Shah		"	Hooselmi Metal Rolling Mill Private Ltd., Atlas Mills Compound, Reay Road, Bombay-10.
19. Shri B. R. Shah		"	Jaipur Metal & Electricals Ltd., Kamani Chambers, Nicol Road, Ballard Estate, Bombay-1.
20. Shri K. L. Bhambri		"	Popular Metal Works & Rolling Mills, Sion, Bombay-22.
21. Shri S. C. Shah		"	Deccan Metal Works, 20, Nagesh Peth Poona-2.
22. Shri R. N. Doshi		"	Standard Metal Works Private Ltd. 17, Tardeo Bridge (Low Level), Bombay-7.

### (B) Manufacturers, Associations :

23. Shri P. R. Kamani	}	"	Indian Non-ferrous Metals Manufacturers' Association, India Exchange, 8th Floor, Calcutta-1.
24. Shri A. V. Jaganathan			



25. Shri G. Gupta }  
26. Shri D.K. Bhatt }

Representing

Western India Sheet Rollers' Association,  
Kamani Chambers, 32, Nicol  
Road, Ballard Estate, Bombay-1.

## (C) Importers :

27. Shri Bhavanidas Binani " Binani Commercial Co. (Pvt.) Ltd.,  
Managing Agents: Pragdas Mathu-  
radas (Bombay) Private Ltd.,  
28/30, Anantwadi, Bombay-2.
28. Shri S. C. Tiwari " Pragdas Mathuradas, 43, Strand Road,  
Calcutta-7.
29. Shri S. R. Daga " Metal Distributors Pvt. Ltd., 12/18,  
Vithalbhai Patel Road, Bombay-4.
30. Shri A. Baldota }  
31. Shri N. C. Shah } " Federation of Non-ferrous Metals Im-  
porters (India), 32, Second Bhoiwada,  
Bombay-2.

## (D) Consumers :

32. Shri Dharamdas Shah " Estrela Batteries Ltd., Plot No. 1,  
Dharavi, Bombay-19.
33. Shri Chandanmal Karam-  
chandji " Jugraj Parasmal & Co., 157, Jamli  
Mohalla, Bombay-3.
34. Shri K. Veeraraghavan " Controller of Stores, Western Railway,  
Headquarter Office, Churchgate,  
Bombay-1.

## (E) Dealers, Associations :

35. Shri C. P. Bhatt }  
36. Shri J. F. Fernandez } " All India Non-ferrous Metalware Manu-  
facturers' Association, Liberty Build-  
ing, Marine Lines, Bombay-1.
37. Shri Gordhandas J. Shah }  
38. Shri Hiralal J. Gandhi } " Bombay Metal Exchange Ltd., Gogate  
Mansion, Kika Street, Bombay-2.
39. Shri M. S. Mehta }

## (F) Government Departments :

40. Shri C. J. Shah " Development Wing, Metals Directorate  
(Metals Section), Ministry of Com-  
merce and Industry, Udyog Bhavan,  
King Edward Road, New Delhi-2.
41. Shri K. R. Rajagopalan " Directorate General of Supplies and  
Disposals, Government of India,  
National Insurance Bldg., Parliament  
Street, New Delhi-1.
42. Shri A. B. Rao. " Indian Standards Institution, Manak  
Bhavan, 9, Mathura Road, New  
Delhi-1.
43. Y. S. Sahasrabudhe " Geological Survey of India, 27, Chowrin-  
ghee, Calcutta-13.
44. Shri V. D. Singh " Collector of Customs, New Customs  
House, Bombay-1.

## (G) Observer :

45. Shri H. S. Desai, 1, Saujanya,  
Devasar Lane, Ghatkopar  
(East), Bombay-39.

# APPENDIX III(A)

[Vide Paragraph 8.1.3]

Statement showing the present annual installed capacity on single shift basis for non-ferrous semi-manufacturers

(Figures in tons)

Sl. No.	Name of the unit	Sheet & strip rolling capacity	Rod rolling capacity	Extrusion capacity		Semi manufactures produced
				Solid	Hollow	
1	2	3	4	5	6	7
<b>A. Units borne on the list of Development Wtr</b>						
1	Indian Metal & Metallurgical Corporation :					
	(a) Madras Unit	3,600	..	..	..	Brass/Copper Sheets and Circles.
	(b) Mettur Unit	3,600	..	..	..	
2	Indian Copper Corporation Ltd., Calcutta.	3,200*	..	..	..	Ditto.
3	Hooseini Metal Rolling Mill Ltd., Bombay.	1,500	..	..	..	Copper / Brass / Lead Sheets.
4	National Pipes & Tubes Co. Ltd., Calcutta.	1,000	..	2,200	100	Copper/Brass Sheets, Rods, Sections & Tubes, Zinc/Lead Sheets.
5	Jaipur Metals & Electricals Ltd., Jaipur.	..	3,000†	..	..	Copper Strips and Copper/Brass Rods.
6	Devidayal Metal Industries Ltd., Bombay.	1,920	..	..	..	Copper/Brass Sheets, Strips and Circles.
7	Rashtriya Metal Industries Ltd., Bombay.	1,356	..	..	..	Copper/Brass Sheets.
8	Kamani Metals & Alloys Ltd., Bombay.	4,333	..	..	..	Copper / Brass / Zinc/Lead Sheets and Strips.
9	Indian Smelting & Refining Co. Ltd., Bombay.	3,600	..	..	..	Copper/Brass Sheets and Strips.
10	Deccan Metal Works, Poona.	600	..	..	..	Copper/Brass Sheets and Circles.
11	Swastika Metal Works, Jagadhri.	1,224**	..	..	..	Brass Circles.
12	Metals & Ores Co. (Division of National Carbon Co. Ltd.), Calcutta.	2,143	..	..	..	Zinc Strips.

1	2	3	4	5	6	7
13	Metal Rolling Works Private Ltd., Bombay.	840	..	..	..	Copper/Brass Sheets.
14	Vasant Shivaji & Co., Poona.	1,200	..	..	..	Brass Sheets/Circle.
15	Jayant Metal Manufacturing Co., Bombay.	..	600†	..	..	Copper/Brass Strips and Brass Rods.
16	Popular Metal Works & Rolling Mills, Bombay.	780	..	..	..	Brass/Copper Sheets/Circles.
17	Shri Mahesh Metal Works Ltd., Madanganj, Rajasthan.	912	..	..	..	Brass/Copper Sheets/Circles.
18	Naranlala Metal Works, Navsari.	300	..	..	..	Ditto.
19	Aggarwal Metal Works, Rewari.	1,116	..	..	..	Ditto.
20	Vummidia (Mfrs.) Ltd., Madras.	120	..	..	..	Aluminium / Brass Sheets.
<b>B. Other Units.</b>						
21	Lallubhai Amichand Private Ltd., Bombay.	312	..	..	..	Copper Strips.
22	Ballisingh Bhagwansingh, Amritsar.	720	..	..	..	Brass Circles.
23	Standard Metal Works Ltd., Bombay.	1,000‡	..	..	..	Lead Sheets.
24	Saru Smelting & Refining Corporation Ltd., Meerut.	50	..	..	..	Lead Strips.
TOTAL		35,426	3,600	2,200	100	

NOTE.— Combined capacity for hot or cold rolled sheets and strips from different metals such as Copper, Brass, Zinc, Lead and Aluminium etc.

\*On the basis of 9,600 tons for treble shift.

†Both for solid rods and strips in coils.

\*\*On the basis of 2,448 tons for double shift.

‡On the basis of 3 tons per day per shift.

### APPENDIX III (B)

[Vide Paragraphs 8.1.3. and 8.2]

*Statement showing production of various non-ferrous semi-manufactures during the years 1957, 1958 and the first five months of 1959*

(In tons)

Sl. No.	Name of the unit	1957	1958	1959 (Jan-May)
<b>1. COPPER :</b>				
<b>(a) Commercial Sheets:</b>				
1	Indian Metal & Metallurgical Corporation Ltd. . . . .	0·15	Nil	Nil
2	Indian Copper Corporation Ltd, . . . . .	154·00	313·00	407·00
3	Hooseini Metal Rolling Mills Ltd. . . . .	7·10	Nil	19·85
4	National Pipes & Tubes Co. Ltd. . . . .	46·90	47·55	12·30
5	Devidayal Metal Industries Ltd. . . . .	965·00	964·00	108·50
6	Rashtriya Metal Industries Ltd. . . . .	50·00	60·25	55·25
7	Kamani Metals & Alloys Ltd. . . . .	595·20	499·00	101·99
8	Indian Smelting & Refining Co. Ltd. . . . .	120·82	193·87	11·20
9	Metal Rolling Works Ltd. . . . .	5·65	33·55	Nil
10	Deccan Metal Works . . . . .	8·40	58·71	6·94
11	Popular Metal Works . . . . .	N.A.	481·15	168·40
12	Naranlaja Metal Works . . . . .	0·20	1·70	0·30
<b>TOTAL</b>		<b>1,953·42</b>	<b>2,652·78</b>	<b>891·73</b>
<b>(b) Commercial Circles:</b>				
1	Rashtriya Metal Industries Ltd. . . . .	191·50	113·75	65·50
2	Shri Mahesh Metal Works . . . . .	15·63	49·25	22·90
3	Aggarwal Metal Works . . . . .	N.A.	121·68	27·46
4	Deccan Metal Works . . . . .	..	..	4·43
<b>TOTAL</b>		<b>207·13</b>	<b>284·68</b>	<b>117·29</b>
<b>(c) Industrial Strips in cut lengths :</b>				
1	Kamani Metals & Alloys Ltd. . . . .	90·10	134·60	72·81
2	Indian Smelting & Refining Co. Ltd. . . . .	..	18·74	23·07
3	Devidayal Metal Industries Ltd. . . . .	114·00	144·00	12·50
4	Rashtriya Metal Industries Ltd. . . . .	74·50	53·50	33·75
<b>TOTAL</b>		<b>278·60</b>	<b>350·84</b>	<b>142·13</b>

(in tons)

Sl. No.	Name of the unit	1957	1958	1959 (Jan-May)
<b>(d) Industrial strips in coils :</b>				
1	Jaipur Metals & Electricals Ltd.	0.50	66.00	27.10
2	Devidayal Metal Industries Ltd.	29.00	9.00	3.50
3	Kamani Metals & Alloys Ltd.	2.40	0.60	Nil
4	Indian Smelting & Refining Co. Ltd.	Nil	1.88	4.11
5	Lallubhai Amichand Ltd.	90.70	82.15	11.82
6	Jayant Metal Mfg. Co.	181.00	189.00	91.00
TOTAL		303.60	348.03	137.53

**(e) Rods other than electrolytic :**

1	National Pipes & Tubes Co. Ltd.	117.15	68.65	24.65
2	Jaipur Metals & Electricals Ltd.	107.20	185.40	3.00
TOTAL		224.35	254.05	27.65

**) Pipes and Tubes :**

1	National Pipes & Tubes Co. Ltd.	58.00	52.85	19.60
TOTAL		58.00	52.85	19.60

**II. BRASS :****(a) Commercial Sheets :**

1	Indian Metal & Metallurgical Corpn. Ltd.	602.38	417.50	420.90
2	Indian Copper Corpn. Ltd.	7,509.00	8,392.00	3,070.00
3	Hooseini Metal Rolling Mills Ltd.	726.17	478.00	185.43
4	National Pipes & Tubes Co. Ltd.	42.70	325.50	15.45
5	Devidayal Metal Industries Ltd.	461.00	385.00	187.30
6	Rashtriya Metal Industries Ltd.	69.25	61.50	15.50
7	Kamani Metals & Alloys Ltd.	2,464.80	3,459.00	554.83
8	Indian Smelting & Refining Co. Ltd.	3,406.07	3,540.23	1,089.36
9	Metal Rolling Works Ltd.	100.25	133.90	Nil
10	Deccan Metal Works	354.78*	356.11*	45.37

NOTE.—\*Inclusive of Brass circles.

(in tons)

Sl. No.	Name of the unit	1957	1958	1959 (Jan.-May)
11.	Vasant Shivaji & Co.	267.30	277.70	154.00
12.	Naranlala Metal Works	2.55	35.80	20.65
13.	Vummidia (Mfrs.) Ltd.	10.84	4.50	7.24
14.	Shri Mahesh Metal Works	3.75	0.25	156.75
15.	Popular Metal Works	N.A.	97.60	40.45
TOTAL		16,020.84	17,664.59	5,963.23

(b) *Commercial Circles :*

1	Indian Metal & Metallurgical Corporation Ltd.	812.07	808.65	364.24
2	Indian Copper Corporation Ltd.	320.00	361.00	173.00
3	Devidayal Metal Industries Ltd.	32.00	38.00	18.00
4	Deccan Metal Works	N.A.	N.A.	106.77
5	Swastika Metal Works	1,208.00	1,659.00	850.00
6	Vasant Shivaji & Co.	236.20	115.70	75.60
7	Rashtriya Metal Industries Ltd.	188.75	197.50	55.50
8	Naranlala Metal Works	363.84	408.21	222.13
9	Shri Mahesh Metal Works	414.96	326.43	Nil
10	Ballisingh Bhagwansingh	N.A.	N.A.	138.10
TOTAL		3,575.82	3,914.49	2,003.35

(c) *Industrial strips in cut lengths:*

1	Kamani Metals & Alloys Ltd.	530.20	676.50	538.00
2	Indian Smelting & Refining Co. Ltd.	..	286.96	147.61
3	Devidayal Metal Industries Ltd.	151.00	214.00	42.70
TOTAL		681.20	1,177.46	728.31

(d) *Industrial strips in Coils :*

1	Devidayal Metal Industries Ltd.	3.00	14.00	6.30
2	Kamani Metals & Alloys Ltd.	88.70	193.40	131.93
3	Indian Smelting & Refining Co. Ltd.	Nil	97.31	68.95
4	Jayant Metal Mfg. Co.	8.00	21.00	10.00
TOTAL		99.70	325.71	217.18

(in tons)

Sl. No.	Name of the unit	1957	1958	1959 (Jan.-May)
<b>(e) Rods :</b>				
1	National Pipes & Tubes Co. Ltd.	1,402.20	1,576.70	380.45
2	Jaipur Metals & Electricals Ltd.	..	..	27.50
3	Jayant Metal Mfg. Co.	54.00	45.00	18.00
	<b>TOTAL</b>	<b>1,456.20</b>	<b>1,621.70</b>	<b>425.95</b>
<b>(f) Pipes and Tubes :</b>				
1	National Pipes & Tubes Co. Ltd.	7.35	7.45	1.80
	<b>TOTAL</b>	<b>7.35</b>	<b>7.45</b>	<b>1.80</b>
<b>III. ZINC :</b>				
<b>(a) Sheets :</b>				
1	National Pipes & Tubes Co. Ltd.	45.45	43.95	4.05
2	Kamani Metals & Alloys Ltd.	11.30	20.10	9.90
	<b>TOTAL</b>	<b>56.75</b>	<b>64.05</b>	<b>13.95</b>
<b>(b) Strips :</b>				
1	Metals & Ores Co. (Division of National Carbon Co. Ltd.).	1,740.55	2,014.75	1,086.75
2	Kamani Metals & Alloys Ltd.	Nil	2.00	1.10
	<b>TOTAL</b>	<b>1,740.55</b>	<b>2,016.75</b>	<b>1,087.85</b>
<b>IV. LEAD :</b>				
<b>(a) Sheets :</b>				
1	Hooseini Metal & Rolling Mills Ltd.	58.10	81.64	48.40
2	National Pipes & Tubes Co. Ltd.	34.50	86.15	12.70
3	Standard Metal Works	394.15	481.00	139.75
4	Rashtriya Metal Industries Ltd.	0.10	Nil	Nil
	<b>TOTAL</b>	<b>486.85</b>	<b>648.79</b>	<b>200.85</b>
<b>(b) Strips :</b>				
1	Saru Smelting & Refining Corpn. Ltd.	3.76	N.A.	N.A.
	<b>TOTAL</b>	<b>3.76</b>	<b>N.A.</b>	<b>N.A.</b>

## APPENDIX IV (A)

[Vide Paragraph 9.2]

Statement showing the estimates of demand (current and future) as furnished by the Development Wing and producers

(in tons)

Sl. No.	Name of the interest	Copper		Brass		Zinc		Lead		Remarks		
		Sheets, strips & circles	Rods	Pipes & tubes	Sheets, strips & circles	Rods	Pipes & tubes	Sheets & strips	Sheets & strips			
		Commer- cial	Indus- trial	Commer- cial	Indus- trial	Commer- cial	Indus- trial	Commer- cial	Indus- trial			
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Development Wing.	Current	25,000*		2500/3000*	...	...	...	..	5,000	550	*Inclusive of brass products. The break down for the future demand has been given as follows :  Sheets Extruded and pro- ducts strips
		Future	30/35,000*		4/5000*	..	..	..	..	6,500	750 to 900	
2	Indian Copper Corporation Ltd.	1959	2,500	500	..	24,000	4,000	..	..	..	..	Copper 5,000 2,500 Brass 25/30,000 2,500  • Estimates are based on the production of three large rolling mills and some of the smaller units.
		1960-62	2,500	600	..	24,000	5,000	..	..	..	..	





	8 National Pipes & Tubes Co. Ltd.	1959	..	..	750	750	..	..	2,500	1,000	..	..	Estimates are based on actual consumption during 1957 and 1958.
		1962	..	..	1,000	1,000	..	..	3,00	1,500	..	..	..
	9 Indian Non-ferrous Metals Manufacturers' Association.	Current.	..	..	..	..	..	..	..	..	2,500 to 3,000	400	..
		Future	..	..	..	..	..	..	..	..	..	600	..



# APPENDIX IV (B)

[Vide Paragraph 9.2]

Statement showing total quantity available for consumption in respect of various non-ferrous semi-manufactures during 1957 and 1958

(in tons)

Serial No.	Name of the articles	1957				1958			
		Production	Imports	Exports	Qty. available for consumption.	Production	Imports	Exports	Qty. available for consumption.
<b>I Copper</b>									
1.	Commercial sheets and circles	2,160.55	..	N	2,160.55	2,937.46	..	17.00	2,920.46
2.	Industrial strips	580.20	587.15	..	1,179.35	699.47	400.80	..	1,100.27
3.	Rods	224.35	11.70	..	235.45	254.05	6.55	..	260.60
4.	Tubes and pipes	58.00	748.50	N	806.50	52.85	569.60	..	622.45
<b>II Brass</b>									
1.	Commercial sheets and circles	19,596.66	0.05	40.60	19,556.11	21,579.08	N	64.15	21,515.83
2.	Industrial strips	780.90	536.85	..	1,327.75	1,503.17	199.20	..	1,702.97
3.	Rods	1,456.20	586.60	N	2,042.80	1,621.70	137.60	..	1,759.30
4.	Tubes and pipes	7.35	698.90	N	706.25	7.45	664.90	N	672.35
<b>III Zinc</b>									
1.	Sheets	56.75	..	..	56.75	64.05	..	..	64.05
2.	Strips	1,740.55	1,569.50	..	3,310.05	2,016.75	640.45	..	2,657.20
<b>IV Lead</b>									
1.	Sheets	486.85	203.80	..	690.65	648.79	37.50	..	686.29
2.	Strips	3.76	..	..	3.76	N.A.	..	..	N.A.

N: Negligible.  
N.A.: Not Available.

## APPENDIX V

de Paragraph 12.1]

Statement showing Summary of Import Control Policy from the licensing period October 1957-March, 1958 to April-September, 1959 in respect of non-ferrous semi-manufactures

Part No. & Sl. No. of I.T.C. Schedule	Description	October, 1957- March, 1958	April-Septem- ber, 1958	October, 1958- March, 1959	April-Septem- ber, 1959	Remarks
1	2	3	4	5	6	7
<b>Part I</b>						
41 (i)	Copper, wrought in the following forms, viz., strip, tape, foil, highly polished sheet specially prepared for making process blocks, lithographic sheet and copper perforated sheet.	(a) 25% Gen. 25% Soft.	(a) 12½% Gen. 12½% Soft.	(a) 12½% Gen. 12½% Soft.	(a) 12½% Gen. 12½% Soft.	(a) (i) Quota licences will not be valid for import of Copper strips, tapes and foils. (ii) A. U. applications from printing houses for import of highly polished copper sheets suitable for making process blocks will be considered <i>ad hoc</i> .
41 (ii)	Copper, wrought in the following forms, viz., rods, sections, pipes, plates and sheets including sheets cut to size, tubes, rods and pipes cut to shape and size.	(b) 25%	(b) 12½%	(b) 12½%	(b)(c) 12½%	(b) (i) Licences will not be valid for import of Copper plates, Copper sheets and sheathing upto 37 S.W.G. and width upto 4' and strips in coil upto 37 S.W.G., copper pipes and tubes of 3/8" to 4" dia., with wall thickness 12 S.W.G. and thicker bars, rods and sections [Note: This restriction does not apply to refrigeration copper tubing in coils sealed at both ends ranging from ½" to 3/4" in diameters and thinner than 12 S.W.G. (wall thickness)]. (ii) A. U. applications from the Sugar Industry for import of copper tubes will be considered by the Dy. C.C.I. (CLA), New Delhi, on an <i>ad hoc</i> basis in consultation with the Ministry of Food and Agriculture (Directorate of Sugar and Vanaspati).
41(iii)	Copper flexible pipes or tubes, for passing gas or fluid under pressure.	100% Gen. 100% Soft.	50% Gen. 50% Soft.	50% Gen. 50% Soft.	50% Gen. 50% Soft.	
43	Lead wrought including the following viz., pipes, tubes, foil, wire and sheets including sheet for tea chests.	Nil	Nil	Nil	Nil	

1	2	3	4	5	6	7
44	Zinc wrought including wire rods, sections, sheets including highly polished sheets especially prepared for making process blocks, lithographic sheets and the following manufactures viz., zinc perforated sheet cut to size.	85% Gen. 85% Soft.	85% Gen. 85% Soft.	(d) <i>Ad hoc</i> .	(d) 15% Gen. 15% Soft.	(c) A. U. applications from Textile Machinery manufacturers for copper sheets and tubes will be considered by J. C. C. I., Bombay on the recommendations of the Textile Commissioner.
46(c)	Brass, bronze and similar alloys, wrought including the following viz., wire, rod, section, sheet, pipe and tube and the following manufactures viz., rod and tube cut to shape and size but excluding chemicals or imitation gold.	(e) 20%	(f) 15%	(f)(g) 15%	(f)(g)(h) 15%	(d) A. U. applications from scheduled industries and from units borne on the books of the Iron and Steel Controller, Calcutta will be considered <i>ad hoc</i> by C. C. I. on the recommendations of the Development Wing. The non-scheduled industry's requirements will be met, either from imports effected by established importers or from canalised imports.
						(e) Licences will not be valid for import of brass sheets and sheathing upto 30 S. W. G. and 4' width, brass rods, sections and strips.
						(f) Licences will not be valid for import of sheathing and sheets upto 37 S. W. G. and 4' width and strips in coils upto 37 S.W.G.
						(g) A. U. applications from the Sugar Industry for import of brass tubes will be considered by Dy. C. C. I. (CLA), New Delhi on an <i>ad hoc</i> basis in consultation with the Ministry of Food and Agriculture (Directorate of Food and Vanaspati).
						(h) A. U. for brass rods and tubes on <i>ad hoc</i> basis.

## APPENDIX VI

[Vide Paragraph 12.2]

Statement showing country-wise imports of non-ferrous semi-manufactures during 1957, 1958 and 1959 (Jan.-April)  
(Quantity in Cwts.) (Value in Rs.)

Sl. No.	Name of the item	Origin of import	1957		1958		1959 (Jan.-April)	
			Qty.	Value	Qty.	Value	Qty.	Value
1	2	3	4	5	6	7	8	9
<b>I Sheets &amp; Strips:</b>								
	1. Copper sheets, strips and plates.	U. K.	8,504	24,35,598	3,150	82,20,24	1,954	4,55,682
		Germany W.	1,559	4,45,738	3,369	6,85,907	187	48,012
		Netherlands	..	..	248	51,977	..	..
		France	..	..	3	3,813	..	..
		Italy	485	1,20,434	945	2,29,336	593	1,12,234
		Czechoslovakia	..	..	8	591	..	..
		Malaya	..	..	200	27,303	..	..
		Japan	120	3,022	20	5,062	..	..
		U. S. A.	97	43,620	73	46,220	4	5,769
		Denmark	33	38,818	..	..	..	..
		Belgium	23	6,512	..	..	160	29,912
		Canada	163	49,838	..	..	..	..
		Austria	685	2,66,512	..	..	..	..
		<b>TOTAL</b>	<b>11,669</b>	<b>34,10,092</b>	<b>8,016</b>	<b>18,72,233</b>	<b>2,898</b>	<b>6,51,609</b>

1	2	3	4	5	6	7	8	9
<b>I Sheet &amp; Strips—contd.</b>								
<b>2. Brass sheets, strips and plates.</b>								
	U. K.		5,790	13,03,567	1,691	3,20,991	874	1,85,207
	Germany W.		413	77,151	324	6,64,482	165	54,411
	Netherlands		19	4,937	62	32,254	59	24,790
	Belgium		433	1,73,261	943	2,17,437	94	24,223
	Italy		4,008	8,42,447	681	1,26,406	259	56,006
	Japan		40	36,195	66	13,026	106	21,917
	U.S.A.		14	8,503	25	16,660	..	..
	Australia		20	11,061	78	19,433	14	7,770
	France		..	..	14	36,978	..	..
	<b>TOTAL</b>		<b>10,737</b>	<b>24,57,122</b>	<b>3,884</b>	<b>8,47,667</b>	<b>1,571</b>	<b>3,74,324</b>
<b>3. Zinc plates.</b>								
	U. K.		35	5,274	..	..	..	..
	Poland		500	31,103	17	1,011	..	..
	Germany W.		92	18,106	60	10,871	..	..
	Netherlands		7	1,406	..	..	..	..
	Japan		..	979	..	..	..	..
	U.S.A.		138	23,554	57	9,020	..	..
	Belgium		..	..	7	535	..	..
	<b>TOTAL</b>		<b>772</b>	<b>80,422</b>	<b>141</b>	<b>21,437</b>	<b>..</b>	<b>..</b>

4. Zinc sheets and strips .		U. K. .	556	68,802	734	66,219	1	124
U.S.S.R. .		30	2,814	..	..	..	..	..
Poland .		6,020	4,07,965	523	48,107	221	18,205	..
Germany W. .		5,943	6,62,077	2,588	2,39,519	563	54,959	..
Netherlands .		120	13,378	150	13,465	69	5,985	..
Yugoslavia .		240	20,961	..	..	..	..	..
Iran .		1	287	..	..	..	..	..
Japan .		9	2,279	..	..	..	..	..
Australia .		7,314	7,54,132	3,250	1,55,698	..	..	..
Belgium .		11,102	12,16,490	5,564	5,29,176	720	65,041	..
Switzerland .		35	6,843	..	..	..	..	..
Sweden .		..	..	..	..	23	1,550	..
TOTAL		31,390	31,56,118	12,809	10,52,184	1,597	1,45,864	..
5(a) Lead sheets for tea-chests.		U. K. .	69	5,866	..	..	..	..
Belgium .		81	8,589	..	..	..	..	..
TOTAL		150	14,455	..	..	..	..	..
5(b) Lead sheets not for tea-chests.		U. K. .	1,111	1,09,071	693	54,284	3	357
Germany W. .		62	7,296	57	3,956	..	14	..
Netherlands .		2,514	2,56,796	..	..	..	..	..
Belgium .		80	9,001	..	..	..	..	..
U.S.A. .		159	24,639	..	..	..	..	..
TOTAL		3,926	4,06,803	750	58,240	3	371	..



1	2	3	4	5	6	7	8	9
<b>II Circles:-</b>								
1. Copper	Germany W.		74	17,827				
2. Brass	U. K.		1	997		34		
<b>III Rods:-</b>								
1. Copper rods other than electrolytic.	U. K.		55	44,852	130	30,760	21	7,996
	Netherlands				1	173		
	Germany W.		1	207			1	346
	Italy			27				
	Ceylon		6	1,081				
	Canada		160	56,311				
	U. S. A.						1	1,647
	Belgium							
<b>Total</b>								
			222	1,02,478	131	30,933	23	9,989
2. Brass rods	U. K.		2,043	3,35,879	179	30,434	59	12,514
	Denmark		127	21,029				
	Germany W.		1,842	3,43,382	135	21,351		
	Netherlands		2,395	4,21,944	1,555	2,02,413	851	1,21,634
	Switzerland		70	13,524	60	8,259	77	12,208
	Italy		25	4,840				

3. Copper rods other than electrolytic.

Yugoslavia	1,621	2,33,926	535	69,928	27	3,632
Australia	2,307	3,77,390	122	18,187	..	..
New Zealand	1,202	1,89,423	130	17,092	..	..
Belgium	..	..	33	4,361	..	..
Austria	..	..	2	43	..	..
Canada	..	..	..	6	..	50
U. S. A.	..	..	1	450	1	4,560
<b>TOTAL</b>	<b>11,632</b>	<b>19,42,337</b>	<b>2,752</b>	<b>3,72,524</b>	<b>1,015</b>	<b>1,54,598</b>

IV Pipes and Tubes:

1. Copper tubes

U. K.	7,935	23,13,803	4,844	12,34,390	1,062	2,97,356
Sweden	..	..	202	75,831	..	..
Germany W.	3,355	10,82,185	587	2,01,768	217	64,314
France	10	3,129	97	33,532	70	20,077
Switzerland	314	95,166	487	1,17,783	25	5,901
Italy	1,986	5,62,303	1,674	4,24,380	442	1,01,263
Yugoslavia	120	31,454	297	74,308	20	4,805
Japan	60	16,270	1,521	3,70,617	308	74,185
Canada	..	..	41	14,536	60	17,400
U. S. A.	563	2,34,467	200	75,511	81	57,431
Australia	..	..	1,442	2,82,351	313	67,496
Austria	627	2,01,788	..	..	19	3,577
Belgium	..	..	..	..	781	1,75,682
<b>TOTAL</b>	<b>14,970</b>	<b>45,40,565</b>	<b>11,392</b>	<b>29,05,007</b>	<b>3,398</b>	<b>8,89,487</b>

1	2	3	4	5	6	7	8	9	
IV Pipes and Tubes—contd.									
2. Brass pipes and tubes									
	U. K.	.	.	3,559	11,45,694	3,346	8,01,077	2,071	5,20,135
	Sweden	.	.	3	1,620	4	734	..	..
	Germany W.	.	.	3,153	8,24,584	2,904	6,01,830	609	1,79,146
	Netherlands	.	.	128	32,739	..	..	..	..
	Belgium	.	.	64	27,029	..	..	..	..
	Switzerland	.	.	..	104	163	34,797	..	..
	Italy	.	.	6,106	14,95,986	4,114	8,40,875	687	1,53,135
	Yugoslavia	.	.	899	1,96,527	2,425	4,56,149	487	87,206
	Japan	.	.	2	3,182	308	65,453	269	64,585
	Zanzibar	.	.	60	15,923	..	..	..	..
	U. S. A.	.	.	4	2,436	3	1,208	368	40,555
	Irish Resp.	.	.	..	..	8	1,332	..	..
	Malaya	.	.	..	..	23	4,186	..	..
	Canada	.	.	..	..	1	675	..	..
	Fr. W. Indies	.	.	..	..	..	..	196	23,364
TOTAL			13,978	37,45,824	13,299	28,08,316	4,687	10,68,126	

# APPENDIX VII

[Vide Paragraph 13.2]

Statement showing exports on non-ferrous semi-manufactures by destination during 1957, 1958 and 1959 (January-April)

Sl. No.	Name of the Item	Origin of import	1957		1958		1959 (January-April)	
			Quantity (Cwts.)	Value (Rs.)	Quantity (Cwts.)	Value (Rs.)	Quantity (Cwts.)	Value (Rs.)
1	2	3	4	5	6	7	8	9
1	Copper sheets, plates & strips.	Hongkong	..	30	..	..	..	..
		Ceylon	..	..	25	5,592	..	..
		Iran	..	..	255	42,870	..	..
		China	..	..	60	11,820	..	..
		Afghanistan	..	..	..	..	36	10,869
	Kenya	..	..	..	..	2	563	
TOTAL			..	30	340	60,282	38	11,432
2	Brass plates, sheets and strips.	E. Pakistan	14	5,327	16	7,357	10	3,851
		W. Pakistan	..	..	1	445	..	..
		Ceylon	757	1,48,844	1,226	2,16,949	132	24,986



# APPENDIX VII

[Vide Paragraph 16]

Statement showing the c.i.f. prices, customs duty, clearing charges and landed costs of non-ferrous semi-manufactures (Figures per cwt.)

Sl. No.	Source of information	Origin of import	Date of import	Type and specification	C.i.f. price	Customs duty	Clearing charges	Landed cost	Remarks
1	Collector of Customs, Bombay.	Belgium	Oct. 1958	Plain zinc sheets to IRS 11.50 8' x 3' x 16 to 24 gauge.	Rs. nP. 71.27	Rs. nP. 17.82 (25%)	Rs. nP. 3.56	Rs. nP. 92.65	
		Do.	Oct. 1958	Zinc sheet 8' x 3' x 15 SWG plain 101 RS 11.50.	70.00	17.50 (25%)	3.50	91.00	
	Collector of Customs, Madras.	Italy	April, 1959	Brass Tubes 70:30 Brass 2" dia. 16 SWG tested to 1000lbs. per square inch ends annealed.	216.00	75.60 (35%)	10.80	302.40	
		West Germany	22-10-58	Zinc sheet 2 ZG 7' x 3' commercial quality.	84.65	21.16 (25%)	0.25	106.06	
3	Indian Non-ferrous Metals Mfrs. Assn., Calcutta— (a) Based on actual imports at Bombay port.	West Germany	8-1-59	Zinc printing plates	165.80				
		Do.	10-1-59	Zinc plates for photo engraving	124.00				
		Belgium	13-1-59	Zinc sheets for photo engraving	133.90				
		U. K.	13-1-59	Zinc sheets for process blocks	161.40				
		Belgium	18-3-58	Zinc strips	83.40				
		U. K.	8-10-58	Lead sheets	83.60				
		West Germany	29-11-58	Lead sheets	69.40				
		Belgium	9-2-59	Zinc sheets	62.80				
		Do.	9-2-59	Zinc plates	69.30				
	(b) Based on actual imports at Calcutta Port.	Belgium							